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Issues of Language, Public Opinion,
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Edited by Asuncion Lopez-Varela



**SOCIAL SCIENCES AND
CULTURAL STUDIES –
ISSUES OF LANGUAGE,
PUBLIC OPINION,
EDUCATION AND WELFARE**

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Social Sciences and Cultural Studies - Issues of Language, Public Opinion, Education and Welfare

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Preface

The umbrella term Social Sciences and Humanities refers to a plurality of fields outside the Natural or Physical Sciences. Disciplines as different as anthropology, archaeology, architecture, art, cultural studies, economics, education, geography and environmental studies, history, law, languages and linguistics, political science, philosophy, psychology, sociology or translation studies, all share the concern for human relations and socio-cultural practices.

In the ancient world, the alliance between political and religious power had guaranteed the interdisciplinary dialogue between the Natural Sciences, the Social Sciences and the Humanities, all closely associated to institutional control. The move towards anthropocentric approaches took place at different times in different regions of the world, alongside the socio-cultural, political, economical and technological forces that shaped each territory, from the establishment of the first learning centers and universities, to the discovery of new ways of looking at worlds beyond our own by means of the telescope. But our world not only changed at the pace humans marked through their changing practices and innovations. Environmental issues, such as the fact that papyrus could not be used in the wet climates of Northern Europe, shaped the way human technologies were used and where. From Chinese paper and the printing press, to contemporary digital communication and networked society, the complexity of human life is such that knowledge divisions are there to set the foundations for groundbreaking innovations across all fields. To say that the growth of the Social Sciences took place mostly in the 18th Century, coinciding with political and economic reforms, sometimes in the form of violent revolutions, that sought national and territorial cohesion in Europe, would be to cast aside similar changes in other parts of the world.

There are many difficulties involved in writing an introduction to a series of volumes that seek to provide an overall picture of human society and cultural habits across differing disciplines, various nations, distinct methodologies and, in some cases, diverse time spans. The volumes oscillate between 'positive' approaches to knowledge, based sense experience and statistical analysis, focused on deduction and description, and interpretative positions, more inductive and prescriptive. Specialization and interdisciplinarity walk hand in hand in a dialogue that seeks to speak across the bio-physical, the socio-cultural and the artistic, under the common

desire to understand humanity more clearly and direct our actions in more effective ways by means of theoretical discussions, innovative ideas, the encouragement of public debates, and interaction across societal structures.

InTech collection on Social Sciences and Humanities is unique and groundbreaking in its combination of questions and answers from very diverse fields and disciplines. It is also a point of connection between East and West, North and South, developed and less developed countries. It includes chapters compiled by institutional research agencies, established scholars, alongside work by younger researchers, all of which point to fruitful alternative routes for further exploration and good practice, seeking to identify current impasses in times of crisis, and to create opportunities and avenues for future change. Key underlying principles are the support innovation and sustainability across the world, the fostering of collaboration amidst the Sciences (both Natural and Social) and the Humanities, and the private and the public sectors of society. The chapters collected address societal challenges across diverse cultures and environments.

Oftentimes the pathways to discovery are laid on shaky ground in order to open up possibilities despite the risks involved. InTech collection Social Sciences and Humanities: Theories and Application is doing just that.

The second volume of InTech collection Social Sciences and Humanities focuses on *Social Sciences and Cultural Studies: Issues of Language, Public Opinion, Education and Welfare* and opens with Prof. Jeffrey Foss' (Univ. Victoria, Canada) provoking inquiry into the distinct condition of the 'social' in the boundary between the humanities and the physical sciences. Ross uses a metaphor, the myth of Private John Smith, a reality, a fiction, an ordinary man, a British spy, someone who could have been many things of zero probability, those things and happen all the time and are unpredictable.

Sylvain K. Cibangu (University of Colorado, Denver, USA) focuses his study on the recently published posthumous work by Karl Popper, including Popper's correspondence with the philosopher Rudolf Carnap. Controversial and influential, Popper's ideas of three worlds, the physical one (world 1, exterior and cosmic world), the world of mental states and subjective knowledge (world 2), and the world of social and recorded knowledge (world 3), pave the way to the classification of sciences. Against the widespread belief that the social sciences represent a weak form of science, Popper supplied a strong sense of the social sciences as being fully scientific, objective, and empirical. The paper shows that scientific objectivity is located within an interdisciplinary, inter-subjective critical dialogue.

The tension between the perspectives of the *present past* and the *past present* remains an important ingredient issues of unpredictability and in modern historiography. Prof. Jaap den Hollander (University of Groningen, Netherlands) discusses two important concepts in the social theory of the German sociologist Niclas Luhmann: autopoiesis and second order observation. As auctorial narrators, historians can profit a lot from

the application of Luhmann's system theory to the study of past, while maintaining the viewpoint of the historical actor recognizable. And what is an actor without a community?

The term community refers to human groups within a society. It may apply to ethnic groups, concentrations relative to gender, people sharing similar interests in the Web, territorial groupings, such as people sharing the same living space, or state divisions from regions to nations. The concept 'imagined community' was coined by Benedict Anderson to refer to people's perceptions of their position (physical, ideological, etc.) within a given human group. Communities are not just about face-to-face interactions. Their members hold in their minds a mental image of their affinity (ideals, similar interests, nationhood, etc.). Common cultural memories are created by means of artistic representations and media. They contribute to the 'imagined community' by converting 'private' citizens into their 'public' audience. Cultural issues, perceptions, and foci give identity to the community, whether a village, a city, or a nation. Works by artists, poets, novelists, visual artists, etc., help unveil the distinctiveness in the way communities are viewed. The term *mindscape*, used to refer to human communities, refers to structures for thinking about human spaces built on conceptualizations of shared space. A number of chapters in this volume are dedicated to the study of communities, since practical outcomes of such an analysis may further our understanding of human dynamics such as 1) how the relationship between urban scenery may affect people's sense of belonging; 2) how after urban change and migratory movements, civic memory may still retain remembrances representative of the community; 3) how the dynamics of change whether environmental, technological, or cultural should ensure social justice and sustainable communities; and 4) how urban issues may affect conflict resolution between individual and communal demands such as mobility, equity, etc. An example of the workings of artistic and intellectual achievements in the struggle to systematize cultural continuity can be found in the rhetoric of every nation. In *The Significance of Intermediality in the Immortalization of the French Republican Nation (1789-1799)* Montserrat Martínez García (Complutense University Madrid) shows the importance of the legitimization of literary, historical and critical discourses into the idea of common nationhood taking as starting point the French nation, a pioneer model to the development of nationalism in the Western world. Anjan Sen (National Tagore Scholar, India) and Asunción López-Varela (Complutense University, Madrid Spain) review fiction narrative and poetry with an eye on human communities. They find that urban Western and Eastern mindscapes (the chapter studies the cases of Europe and India) oscillate between utopian ideas of garden cities and critical views of industrial environments. Between the lines of their paper emerge the varied meanings of 'modernity', not just as cultural ideologies, but also as political actions seeking to redefine the economic landscapes of our global world.

By 2050, the world population is expected to increase to a total of 9 billion, while the population living in urban areas is projected to grow to a total of 6.3 billion. It is

inevitable that this rapid increase of urban population will bring enormous economic, social and environmental pressures, resulting in a need for governments to take urgent measures. Against this backdrop, the United Nations Centre for Regional Development (UNCRD) is refocusing its work towards sustainable urban development. The UNU Institute of Advanced Studies (UNU-IAS) is also taking an active role in the sustainable urban development dialogue. Although urban growth rates are slowing down in most regions of the developing world, levels of urbanization are expected to rise, within the least urbanized regions of Asia and Africa, transforming these largely rural societies to predominantly urban regions. In sharp contrast, the phenomenon of shrinking urban populations can be observed in cities in the developing world. Some issues to attend to include: greening the local economy; creating a green job work force; providing sustainable urban transport options; developing resource efficient buildings; implementing ICT solutions for smart and connected cities; and fostering waste minimization through a recycling-based society.

Sustainability is a fundamental issue and the object of the chapter by Prof. Carlo Sessa (Institute of Studies for the Integration of Systems of Rome), who presents the AWARE initiative. Funded by the European Union, the research program offers a method for participatory citizenship involvement in areas related to sustainability, and has been applied in three pilot EU funded projects: sustainability in cities (www.raise-eu.org), urban transport (www.move-together-exhibition.net) and coastal water management (www.aware-eu.net). Similarly, Robert García (Executive Director) and Seth Strongin (Policy Research Manager) report on citizenship participation in urban greening in Los Angeles, California. They offer practice examples related to 'The City Project', where community driven organizing and legal campaigns have helped create and maintain parks in segregated and low-income neighborhoods. Each case study presents quantitative and qualitative evidence that the use of civil rights and environmental law influence investment of public resources to create and maintain new parks is a successful and replicable model for other cities. Ecological security in China is the object of the chapter by Prof. Zhuowei Hu, Prof. Hongqi Liu and Prof. Lai Wei (Capital Normal University, Ministry of Education and Ministry of Civil Affairs), who study the environmental impact a major project, Beijing-Tianjin Inter-city High-speed Railway. The authors explore geologic hazards such as landslide and soil erosion, permanent land use in roadbeds, stations, bridges, road access, and so on. The paper collects remote sensing data in order to meet the project requirements and monitor applications.

Protest is an instrument of citizenship participation that remains largely under-researched. The proposal to study protest using game theory, presented here by Prof. Daniel Stockemer (University of Ottawa) is highly innovative. He shows the conditions under which the inverted U relationship (when a weak regime engages in moderate degrees of repression and the civil society actors decide to protest) and the backlash repressive hypothesis occur, and how both further weaken the government

and trigger an overthrow of the regime. The backlash hypothesis prevails under two scenarios: under the first scenario, the government is strong and represses harshly and civil society actors protest despite the strength of the government. As the examples of China and Burma reveal, these protests are often violent and trigger subsequent periods of relative calm. Under the second scenario, the government represses harshly despite being weak. This scenario can lead to very volatile situations because the protesters have a lot to gain from protesting and the government has a lot to lose. Such situations might spur protests and violent reactions, which can easily spiral into a civil war. The empirical examples of Sudan, Somalia, or the Democratic Republic of Congo fit this scheme. Which of the two theories actually holds depends on the dynamic cost-benefit calculation of the state and civil society.

Alongside citizenship participation and protest, equality is a crucial aspect in the equilibrium of human communities. Ethnic and gender equality are still pending subjects in many parts of the world. Critical research and teaching on gender/sex, gendered hegemonies, gender relations, gender identity and social categories remains in the contemporary agenda as a means of challenging traditional categories of class, ethnicity and sexuality and essentialist perceptions of gender. For this reason, Prof. Xiana Sotelo (Univ. Francisco de Vitoria, Madrid Spain) explores Intersectional Analysis and Gender Theory in relation to the Social Sciences, offering a review of Intersectional proposals in the Anglo-American environment and hoping to provide some light to similar problems in other cultural environments. Similarly, Prof. Maya Zalbidea (Univ. Camilo José Cela, Madrid Spain) focuses her attention on cyberfeminism and online awareness of gender issues. Her paper introduces, both in the Spanish context and abroad, research on the role of women in the Information Society, on their visibility and participation as equal rights citizens. The chapter proposes a reading on the evolution and development of differences among women in a parallel movement towards intersectional analysis, presented in the previous chapter.

Equality concerns not only gender issues, but also the involvement of other minority groups in the cultural construction of social affairs. Social realities in many parts of the world offer manifestations of public separatism or irredentism in various forms, dictated by mostly by ethnic motivations. Despite the increasing tendency to overcome the national-state boundaries and to move towards supranational associations like the European Union, demonstrations of ethnic (peaceful or less peaceful) otherness appear daily in the media. This situation naturally provokes interest in human groups that live in foreign ethnical environments. Prof. Katrine Fangen (University of Oslo) looks at social exclusion and inclusion of young immigrants and underlines its multi-dimensional aspects –educational, labor market exclusion, spatial exclusion, relational exclusion and finally, socio-political exclusion. The chapter also shows the relationship between education and access to the labor market for young immigrants (particularly from African descent) in Sweden. For first-generation immigrants, lack of fluency in the dominant language and knowledge about the local system contributes to

incomplete school certificates that restrict access to higher education. She extends her analysis beyond the borders of local communities into the different arenas in which processes of social exclusion occur, not restricting the focus to education or the labor market, but rather seeing inclusion and exclusion in both of these arenas, together with young people's belonging or non-belonging and participation or non-participation in local communities, gangs and peer groups, families, leisure activities as well as in civic and political organizations.

Prof. Mary J. Gallant (Rowan University, USA) addresses issues of international law and the politics of war and genocide through a revision of policies by the International Criminal Tribunal for the former Yugoslavia. The 1990s wars afford insight into the challenge of sustaining diversity and community. The role of international law is highlighted in terms of being a force for social order in the aftermath of great social upheaval. Leaving justice entirely to the victims is hardly likely to produce anything better than suspicion and bitterness. Where local courts are left to bring justice to victims and perpetrators, they tend to bring unhelpful harshness and there is the constant danger of politicization. The author recommends that future research examine the difficulties of multi-national efforts and effective action when war, atrocity and genocide threaten civilian lives.

Justice and citizenship is also the subject of the chapter by Prof. Diane Ketelle (Mills Liberal Arts College, California). In the context of San Quentin State Prison, the oldest, largest and only death-row prison in California, the author presents several examples of self-narratives written by imprisoned inmates in an attempt to come to terms with their past and future. The prison was built with a capacity to hold 3,302 inmates, but in recent years it has held over 5,000. Most of the inmates are African American, Latino or Native American, which points to a clear relation between ethnic minority groups in the USA, reduced exposure to education and reduced employment opportunities. The case is similar to those presented above in the European context. The writing workshop project, conducted by the author of this chapter, contributed to fortify the lives of inmates and develop their interrelational capacities along the lines of the emotional and the spiritual. They were able to read, write memoirs and poems, and participate in reading discussions, systematically creating a sense of bonding, community, hope and positive approaches to life.

One of the positive outcomes of close interpersonal relations in communities is a great sense of trust in others and less vulnerability in relationships. In certain environments, such as during armed conflict or in prisons, people may see each other as threats and enemies. Issues of security are becoming more and more important in our global world. Protection against terrorism and violence, for example, requires laws and political actions that alleviate insecurity. Riitta Vornanen, Maritta Törrönen (University of Eastern Finland), Janissa Miettinen & Pauli Niemelä (University of Helsinki, Finland) focus their analysis on the conceptualizing of insecurity from the perspective of young people. This is an interesting approach for studying insecurity

based on the dynamics of interpersonal and intercultural relationships in communities. Considerable research has been carried out in Finland regarding this issue, differentiating six areas for the study of security: 1) health, 2) community relations, 3) security systems, 4) cultural and humanistic issues, 5) territorial (national) security, 6) econological and environmental security. This chapter offers a qualitative study that confirms that young people describe insecurity in a three-dimensional way: by connecting it first to their inner feelings and emotions as an inner experience with basic security and balance, second, to their social relationships, and third, to external circumstances, including socio-economic resources, violence, and war. Their social relationships give special significance to parents, to other relatives, and to friends. The external circumstances cover international relationships and global circumstances. At the societal level, insecurity connects with security resources, social support, and a secure environment. The results provide evidence for developing the concept of insecurity as a multi-level experience, which has manifestations at a personal level as well as in young people's orientation to more distant issues.

If relationship is fundamental in building security, it is also important to study how a growing number of multicultural societies cope with cultural and linguistic diversification. There are over 6600 languages in the world and over 2000 only in Africa. Multilingualism is therefore a challenge to maintain equal opportunities, secure the implementation of policies and laws. And build trust. For this reason, UNESCO favours linguistic diversity and the maintenance of multilingualism. Several chapters address linguistic concerns in this volume. Prof. Beban Sammy Chumbow (University of Yaounde & Cameroon Academy of Sciences) presents the Tier Stratification Model of language planning in multilingual settings. The model, in accordance with UNESCO, seeks to capture the dialectic and dynamic relation that should exist at the private and public realms. Given the potential problem of dominance and tension in situations of language contact and the need for a harmonic relationship in a pluralistic state, certain "principles of functional complementarities" are rationalized as relevant factors in the mediation in an ideal language planning model that seeks to enhance national identity while maintaining pluralism and ethno-linguistic diversity. Prof. David John Farmer (Virginia Commonwealth University, USA) also concentrates on linguistic aspects and his contribution analyzes the relevance of epistemic pluralism within public policy. The chapter discusses the relevance of Ludwig Wittgenstein's language games in neuro-economics. The discussion on language and content technologies has a strong potential for innovation in all sectors, as chapters in this volume show. Prof. Farmer presents their applicability as quality-of life-indicators across social dimensions, including people's health, education, personal activities and environmental conditions. Two more contributions highlight the relationship between language, cognition and interpersonal relationships. Prof. Barbara Sicherl-Kafol (University of Ljubljana, Slovenia) and Prof. Olga Denac (University of Maribor, Slovenia) explore musical language and empathic awareness in cross-cultural environments. Their research involves several public organizations and universities in

Ljubljana and points to the importance of creativity as a social force in the Ljubljana Music Festival and Slovenian Musical Days.

The following chapters deal with cultural memory and dissemination within communities. Alongside citizenship participation through political action or artistic performances, the transference of public knowledge is an important element in the cohesion of human communities. There are two fundamental ways by means of which this dissemination is achieved: media dissemination, including the press, and knowledge sharing in educative environments. In recent years the visibility of academic research depends more and more on education rankings and journal indexes. Prof. José M. Gómez-Sanch and Prof. Carmen Pérez-Esparrells (Universidad de Zaragoza & Universidad Autónoma de Madrid) explore higher education rankings and how to valorize the research in Social Sciences and Humanities, since these areas tend to be marginalized in journal indexes. Their chapter argues that academic quality is not one-dimensional, but rather multidimensional, and involves the quality of teaching, the quality of research, quality as a combination of activities (teaching and learning, research, development and innovation), quality as an institutional mission, etc. As a result of this multidimensionality there is no consensus on what constitutes "quality" or "excellence" in higher education. Furthermore, quality is not homogeneous in schools, colleges and universities, and programs can greatly vary. In general, although the majority of the more established rankings attempt to measure precisely academic and scientific quality in both teaching and research, experience has shown that the most popular global rankings (i.e. the rankings of world-class universities) in fact reflect many factors related to institutional reputation and prestige, and there is an acknowledged lack of an appropriate battery of performance indicators at international level to comprehensively measure the total quality of higher education institutions, and to consider all the fields of knowledge in which they work. Similarly, Prof. Petruša Miholič and Prof. Dorjan Marušič (University of Primorska, Slovenia) study scientific publishing in the field of social medicine in Slovenia. Their paper also questions bibliometrics and evaluation based on citation analysis, which only measures the response a work triggers within a given scientific community, and the quality of research work, but does not an assessment of the entire activity. The fact that such impact is only achieved if the research is published in English, maintains professional terminology, and enables greater international exposure, is not a criterion for higher quality in publications. In Slovenia, the COBISS (co-operative online bibliographic system and services) monitors research achievements for each individual researcher. Comparison of the results of bibliometric analysis of the ISI Web of Knowledge, the Slovenian Journal of Public Health *Zdravstveno varstvo (ZV)* and the European Journal of Public Health (EJPH) for the period 2003-2010, leads the author to the conclusion that the ZV is not behind EJPH and that Slovenian scientists could also publish the results of their research projects as scientific papers in local scientific journals. The difference in publication is that publishing in EJPH brings greater exposure and a greater number of received citations. The paper also argues for the

promotion of Open Access publications, particularly for research funded with public funds.

Quality assessment is usually regarded as a tool for assessing performance of public institutions. Quality assurance is also a policy tool for assuring minimum standards of higher education services provided by national, local public, and private higher education institutions under the official recognition of national governments. Prof. Akiyoshi Yonozawa (Nagoya University) presents the Japanese initiatives for quality assessment in education and research in the Social Sciences and Humanities. The author also discusses the rationale for assessing the quality of research, international recognition, and the challenges facing the social sciences and humanities under globalization. As of 2011, Japan has 86 national, 95 local-public, and 599 private universities. While acknowledging the efforts of all national, local and private higher education institutions, the assumptions and conclusions of the article apply mainly to the national university sector. In 2004, Japan national government introduced a corporate-style governance system into public universities. This was accompanied by a new evaluation scheme to be implemented by the National Institution for Academic Degrees and University Evaluation (NIAD-UE). Most local public universities have adopted the model and face pressure from local assemblies to engage in formal performance assessments. In addition, the Japanese government requires seven-year, cyclical 'certified evaluations' (accreditation) for all national, local public, and private universities and colleges. Project-based funding schemes, such as the 'Centres of Excellence (COEs)' in research and 'Good Practices,' which are found in various other education programs, are regarded as indirect forms of performance assessment. Japanese initiatives are much in line with the quality assessment proposals introduced by the European Space of Higher Education in recent years.

Similarly, knowledge dissemination in education is experiencing a general trend to urge students to become more active and involved in their own learning processes. Intention, initiative and entrepreneurship are highly praised qualities that are seen to have a positive effect on the functioning of communities. Thomas Hansson's contribution illuminates the mediating role of technological tools in education and questions the belief in collective subjectivity, particularly fashionable with the popularization of social-software and online tools for the co-creation of a shared 'learning objects'. The paper explains the differences between individual and collective input to human activity systems. According to Hansson, neither an individual subject, nor a collectivity of subjects, influence the potential for learning. It is rather the singular individual(s) within the group who controls collective development of higher mental functions for the members of the group. If participating members stop providing data, there would be no shared learning object, explains the author. The findings show that less successful participants post their verbal input at a level that is rational from an individual perspective alone, less aware of social construction, social competence or empathy. Prof. Jan-Albert van den Berg (University of the Free State South Africa) also evaluates social networks in relation to the dynamics of communal

perspectives of embodied spirituality. The author's approach places its emphasis on hermeneutical methodology, where spirituality is a universal human concern, and argues that pastoral theology needs to be revisited beyond the boundaries of religious and disciplinary contexts in order to formulate possible perspectives for an anthropology of singularity.

Prof. Şendil Can (Mugla University Turkey) studies the impact of parental guidance on pre-service teachers' attitudes towards educational technologies in Turkey. His study shows that positive attitudes contribute to make more efficient use of technologies in teaching, enhancing motivation for all partners involved in the learning process.

Finally, the chapters that deal with ecological and social welfare issues. Prof. Sammy Beban Chumbow (University of Yaounde & Cameroon Academy of Sciences) focuses on the study of the implementation of health awareness in Cameroon. The paper presents a case study for the implementation of health measures in Cameroon (such as reduction of infant and maternal mortality, fight against HIV/AIDS, roll back malaria, etc.). The study confirms the hypothesis that a mastery of the language used in the sensitization exercise leads to a higher level of understanding of the innovation and this favors the appropriation model. The logical conclusion is that to enhance appropriation of innovations in development, there is a need to incorporate the language factor in initiatives in order to go beyond awareness and achieve a change in attitude, behavior, and ultimately a change of mind-set. Prof. Muhamad Saiful Bahri Yusoff and Prof. Ab Rahman Esa (Universiti Sains Malaysia) offer a literature review on stress-management in medical students and reveal important positive outcomes on several areas related to health, such as improved loneliness and mood disturbances, improved physiologic and immunologic health markers, improved quality of life, spirituality, and empathy, increased awareness about stress and its effects and management, etc.

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Section 1

Science and Interdisciplinarity

Are the Social Sciences Really- and Merely- Sciences?

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1. Introduction

Are the social sciences (psychology, political science, economics, anthropology, sociology, etc.), really sciences? I will argue that the answer is yes, they really are sciences—but not *merely* sciences. The defining subject of the social sciences, the human being, makes them sciences of a special sort, for the human being is an insoluble mystery with inviolable rights. On one hand this denies social science complete knowledge of its subject, the human being, and on the other gives it responsibilities for humankind.

One philosophically deep truth—the real lowdown, as they say—is that the human being, viewed as a physical system, is chaotic (Foss 1992). This means that physics as such cannot predict the behavior of the human being as a physical system, even if its onboard computer, the brain, is included—or we should say *because* the brain is included, for that beguiling chunk of biological information processing matter between our ears makes us an essentially open system. As it turns out, we are informavores (Miller 1983, Dennett 1996) of considerable sophistication, with deeply imbedded social systems that satisfy our craving for knowledge and belief—however well or poorly informed. Our hunter-gatherer ancestors hunted information with their eyes and gathered it with their ears. With the printing press we learned to consume books, and nowadays we graze on the internet.

Because we are informavores, science (whether physical or social) has to cooperate (or compete) with the humanities to explain the behavior of the human being—and this has enormous implications for the ethics of the social sciences, and in particular its interpretation of scientific objectivity. Light travelling from a distant star, to take just one example from infinitely many, is just light from a physical point of view. Because we can see it, we can extract information from it, and so it carries information for us—even though the light may have been emitted by the star before our species even existed. Physical science cannot specify the information carried by the light, but only its physical parameters, its wavelength, frequency, energy, momentum, speed, etc. Even more striking is the fact that there is no way to define or specify the information it carries—the *meaning* of the light—for that varies with the perceiver. The child sees only a point of light, whereas the adult sees a star, and the astrophysicist sees a red giant on the point of exploding, and so on.

What anything means depends on what the perceiver can take from it—and that could be anything. For example, the meaning of light from a star for a soldier in a trench may be this: the sky is clearing, so we will be attacking. In other words, the meaning of anything depends on

how it's interpreted, and there are always infinitely many possible interpretations. So, because we are informavores, physical science cannot understand us, for meaning and interpretation are not within its scope, but lie within the domain of human interests and feelings—the domain, traditionally, of the humanities (literature, history, philosophy, languages, drama, art, etc.). Because *Homo sapiens* employs meaning in most aspects of its behavior, the social sciences lie athwart the boundary between the humanities and the physical sciences. (Foss 2007, 2011).

2. The myth of Smith

To explain, please let me, a humanist, employ a myth, in the same spirit as my intellectual forefather, Plato, employed myths: to glimpse wisdom. Picture a group of soldiers marshaled on a ship deck in the cold grey dawn of a day in November, 1940. They struggle to keep their balance as the officer on the bridge warns them that in two minutes they will hear the siren calling them to their battle stations. They are soldiers, therefore cargo, so their battle station was below decks. The siren blares, startling one soldier, who jerks to attention. His petty officer taps him on the shoulder and says, "Private Smith, uh, I regret to inform you, uh, private, that wireless has just informed us that, uh..., well, your mother has died."

Consider now two possible outcomes: in outcome₁, our system, Private John Smith, an airframe mechanic, follows a course of events that results in his becoming, by May of 1944, a Nazi spy—whereas in outcome₂, Smith becomes a British spy.

Here, the philosophically deep truth is that the social scientist has little more to tell us which course of action will be taken by Smith than does the humanist—as proven by the *physical sciences*. Physical science tells us that there is no way to predict which of the two observable outcomes will take place in 1944, because at that cold grey dawn in 1940 they both had a probability of zero. They were just two among an uncountable infinity of possibilities, so the probability of any of them is one divided by infinity, which is zero. Non-mathematicians may picture the uncountable infinity of points in any given circle: the probability that a mathematical point tossed at the circle will hit a specified point in the circle (given the non-denumerable infinity of points in any direction, however small, from the given point) is zero. And so, yes, things of zero probability—which is, after all, just a human measure of what to expect—do happen. In fact, they happen all the time. But they are therefore *unpredictable*.

B. F. Skinner once quipped, "You can't have a science about a subject matter which hops capriciously about" (Skinner 1948, p. 76). One goal of this paper is to help us understand how, contrary to Skinner, you *can* have a science about unpredictable phenomena, including the human phenomenon. Just before the passage quoted above, Skinner's protagonist says "I deny that freedom exists at all. I must deny it—or my program would be absurd." So we must also understand how freedom may exist—*despite* some scientists' attempt to abolish it in order to justify and motivate their science. Fortunately, freedom and science can happily coexist, as we shall see.

3. The role of physics in science and society

Ah yes, the physical sciences! The social sciences are defined, whether they like it or not, by their contrast with the physical sciences.¹ The *paradigm* of the physical sciences is physics.

¹ It is usual for the physical sciences, physics and chemistry along with their sub-disciplines such as astrophysics and biochemistry, to be misleadingly nominated "the *natural sciences*" (even, or especially,

Physics defines the ontology of the other natural sciences, the fundamental particles and forces of which everything is made, their causal connections, even space and time themselves. Physics is unified and complete, exhaustively spanning its domain with precision and accuracy. Physics unlocks the mysteries of chemistry, tracks the past through isotope dating, unravels the DNA control codes at the heart of each cell, and reveals the firings of our neurons as we ponder it all.

To the extent that knowledge is power, physical science represents this power—and all its consequent authority—to our species. Physical science gave us the atomic bomb, the transistor, the information age, and social networking. It has transfigured the globe and *Homo sapiens*. For the many (to coin Aristotle's useful term), science is identified with physics, and so for them the answer to our question is clear: since knowledge is power, the social sciences are not sciences, or at least are not successful sciences. This view, although quite reasonable given its paradigm of science, is nevertheless misleading— and that difference between social and physical science is something for which we may (and perhaps should) be grateful.

4. The role of the social sciences in human life

What is the paradigm of the social sciences? What stands to them as physics stands to the physical sciences? Which of them could claim to define the ontology of all of the social sciences, and provide the key to their success? As we can readily observe, the social sciences are more problematic than the physical sciences even when it comes to their definition: none can claim to be the paradigm of the social sciences as a whole. In Kuhn's terminology (Kuhn 1962), the social sciences are in their pre-paradigmatic stage, where none has achieved dominance over the others to such an extent that it defines the social domain in the way physics defines the physical domain. In pre-paradigmatic science, Kuhn claimed, "...though the field's practitioners were scientists, the net result of their activity was something less than science" (Kuhn 1962, p.13). As fecund as this historical observation of Kuhn's has been, I will argue the contrary view that the social sciences are *more* than science, not less.

True, the individual social sciences are more diverse, more *independent* from one another than the physical sciences. Psychology, political science, economics, anthropology, sociology, etc., remain sciences in the plural, and resist unification under a particular, paradigm-dominant, social science. They are *competing* programs to explain human behavior. There is no hierarchy in the social sciences (unlike the physical sciences). None has achieved anything like the powers of explanation, prediction, and control achieved in physics—and it is just such power that made physical science monolithic, and permitted it to extend the rule of the "fundamental forces and/or particles" over the entire physical domain.

in university calendars and other academic contexts)—as though *Homo sapiens*, the paradigm of the social sciences, were not natural. This is an intellectual hangover from the days of Galileo and Descartes, who secured a place within human cognition for the physical sciences by declaring the soul outside the reach of physics, and safely within the domain of religion and the Church. But nowadays it is plain that human beings are naturally occurring animals, visible to the naked eye, with a location in space and time, composed largely of complex hydrocarbons that grow or decay depending on their physical circumstances according to well known physical laws. The social sciences are therefore *within* the natural sciences, properly understood. The proper logical complement to the social sciences is not natural science, but *physical* science.

The psychologist would perhaps be best placed to claim the ability to predict Smith's fate—or, to put it more scientifically, to estimate the relative probabilities of outcomes 1 and 2. But even then, the psychologist would require more knowledge of Smith, including perhaps some behavioral tests, analysis of bodily fluids to tests for drugs or the presence of metabolite residues indicative of stress or neural disorders, etc. And, of course, if our mythical Smith were to be observed and have these tests administered, it would change his future behavior with far ranging consequences including perhaps that *neither* outcome₁ nor outcome₂ occurs.

If we were in a Socratic mood, we might annoyingly ask the psychologist: Would you, at least, be able to predict outcome 1 or 2 with, say, a two-thirds accuracy rate, even if you were to be magically presented with *all of the data* you could wish in order to apply the theory with which you would do your predicting? Would you wager your research grant money on it at odds of double-or-nothing (if you bet 1 dollar and you are right you get 2 dollars back, if you are wrong you get nothing), thereby guaranteeing infinite research money so long as you can predict the outcome better than a coin toss?

To this the psychologist is apt to reply along the following lines: the precise prediction of behavior is not the objective of psychology in the first place. Sure, it would be nice to have such a deep understanding of human nature, but psychology has a *therapeutic* goal as well as a purely epistemic goal. Indeed, the social scientist *may* (but also may not) go even further, and state that the epistemic goal is pursued merely as a means to the therapeutic goal. Generally speaking, social scientists seek—and quite reasonably claim—*practical wisdom* as well as scientific insight. In Aristotle's terms, that means psychology is not mere *theoria*, but a branch of *philosophy itself*. Therapy presupposes a sufficiently healthy concept of human wellbeing, or happiness, and that concept cannot be defined within the context of any one aspect of human existence such as politics, society, the body, or the mind. Human wellbeing can only be defined from the global viewpoint of philosophy.

And quite remarkably, from the philosophical point of view, therapy (and its implicit concept of human well-being) is something the social science, psychology, shares with the physical science, biology. Biology is unique among the physical sciences for having its own therapeutic and clinical practice in the form of its inclusion of *medicine* as part of its overall scientific undertaking. Psychology and Biology are sciences that we collectively *apply* to *ourselves* via the discipline of *medicine*. For the human animal, like other animals, *suffers*, from many things—and we seek salvation through treatment: *therapy*. These facts are woven into the fabric of our lives. You can get a day off because you, your heart—or your mood—is unwell. Depression, a medical disease which is treatable through drug or behavioral therapies, will get you this day off just as surely as a broken leg. Psychiatric and psychological practitioners will be paid by the state to treat you, and on the weight of their signature you will be excused for being absent from your work or your class. Biological medicine treats diseases of your body, and psychological medicine treats diseases of your mind.

Not only that, but doctors and psychiatrists (as doctors of the mind are called) can provide expert testimony at your trial (thus placing them in a distinct sociological class from the other social scientists, anthropologists, political scientists, economists, sociologists, etc., who seldom are asked to give *expert* testimony in court).

To illustrate the significance of this point, let's return to our mythical Smith, who upon hearing the shocking news of his mother's death, was treated by Dr. Holman, the troop physician, for shock. Smith's pulse, temperature, and blood pressure were off the chart. (These physical indicators are still used today, only we now call shock "acute stress reaction".) When released back into his unit, Smith's symptoms recurred. It soon became apparent that Smith was of little value as a military asset, so he was placed under the care of Holman, who, as it happened, was a Major in the Royal Canadian Air Force, a career officer who had served in the First World War, on his way to command a military hospital specializing in what was then called shell-shock (and which we now call "post-traumatic stress disorder").

After a few weeks of therapy and observation in Holman's hospital in England, Smith's condition improved, and Holman began releasing him on day-passes, and then eventually weekend passes as Smith proved he would return to the hospital as ordered. Smith could leave the hospital, but he couldn't leave the air force. He was under Holman's command, and like a good soldier, he obeyed. Smith seemed on the path of a normal recovery, and managed small jobs at the hospital, pleasing Holman and reassuring him in his treatment. So Holman was shocked (if not precisely in the medical sense) in May of 1941, when Smith was brought back from his week-end leave trembling and in handcuffs, arrested by Military Intelligence on suspicion of treason: spying for the enemy! Naturally, Holman couldn't help wonder whether he had made a mistake in releasing Smith in the first place. Should he have?

5. The unity of the social sciences in the disunity of the human being

As we have seen, physical science is united under the ontological umbrella of physics. Is there any corresponding sort of unity in the social sciences? Yes, but the parallel involves a striking and philosophically important dis-analogy between the physical and the social sciences. Whereas the physical sciences are unified by the most elementary phenomena of the known universe, the fundamental particles and forces, the social sciences are unified by the most complex phenomenon of the known universe: the human being.

To the extent there is any unity of the social sciences, it is found in the paradigmatic role of the human being in each. (Surely it is no accident that the French term for the social sciences is the sciences *humaine*—it correctly identifies their essential subject.) The human being *is* the paradigm political being, paradigm psychological being, paradigm economic being, and (obviously!) paradigm anthropological being. From the point of view of empirical knowledge, this is quite reasonable. We human beings stick out like a sore thumb among the life-forms of the planet. Only we drive automobiles, cruise the internet, eat pizzas from the corner shop, are aware of our flawed nature, and try to do something about it. Some scientists even go so far as to see us as living outside the ecosystem (Eldredge 2001),² a

² Eldredge says, "Humans do not live with nature but outside it. *Homo sapiens* became the first species to stop living inside local ecosystems. All other species, including our ancestral hominid ancestors, all pre-agricultural humans, and remnant hunter-gatherer societies still extant exist as semi-isolated populations playing specific roles (i.e., have "niches") in local ecosystems. This is not so with post-agricultural revolution humans, who in effect have stepped outside local ecosystems. Indeed, to develop agriculture is essentially to declare war on ecosystems."

planetary disease (Suzuki 1994)³, an invader upon the very bosom of Mother Earth who gave birth to us in the first place—a bizarre paradox!

And yet it is understandable that, however it is conceived, the manifest gulf between us and the other life-forms of the planet will express itself somehow even in science—just as it is understandable that we often look upon that gulf with pangs of guilt. For we are the ones who brought this world and its life-forms to the brink of nuclear winter—a catastrophe for which scientists themselves feel a particular species of guilt. So, the more things change, the more we end up with the same thing: scientists now thunder about our guilt where not so long ago this was the function of priests. Now we measure our guilt by the degree of our environmental impact, though it seems just like yesterday we measured our guilt by the degree our perverse hearts turned away from God’s commands.

And so neither the unity of the social sciences, nor of science as a whole, nor the very unity of the universe itself, can heal the divisions within the human being. That in itself is no criticism of science, for religion fails in precisely the same way. From the outside we are from the scientific point of view unpredictable, and from the religious point of view free—but from the inside we feel neither truly free nor truly forced in what we say, do, or think. Instead we are aware of the tensions inside of ourselves, our self-knowledge being often outflanked by our self-surprise. And so we sometimes do what we conceive as wrong, we feel guilt, and our moral authorities, now expanded beyond religion to include science, thunder our accusation, prophesy doom, and tell us how to regain our innocence. Surely it is no accident that environmental science’s ideal of sustainable human life bears more than a passing resemblance to the Garden of Eden (Foss 2008, Ch. 7).

So science, the self-proclaimed guardian of objective truth, that sticks to the facts and nothing but the facts, nevertheless chastens and upbraids us. Again a paradox: for we have come to accept the scientific view of our nature, which says that everything we do was caused. Our science and technology are products of evolution just like our feet and brains. But if I am caused to do what I do, I cannot feel real guilt about it. I confess that if I very seriously and honestly imagine that the wicked things I do are completely and utterly caused, I cannot feel any real guilt. If, as the Stoics suggest (Konstan 2008, Ch. 2), I conceive there is no punishment, no suffering, no loss of happiness for myself or anyone else whatsoever over my actions (for this, too, pains me), then guilt in the old religious sense—that feeling of failure, inadequacy, of shrinking to the size of a mouse, and the imminence of *deserved* pain—cannot be felt.

A mere 50 years ago the common view of the many was that the human being is composed of two elements: body and soul. In this ancient view, which is still pervasive, our souls are thought to be indispensable to our very essence, for they are the part of us which permits us to be conscious: our souls are the divine machinery of our existence as *conscious* beings. To be is to be *conscious*—as Descartes said: when we are in a dreamless sleep, or what we would now call a coma, we cease to exist. Our essence is consciousness.⁴ Ah yes, but the religious

³ Suzuki says, “... the monster is us. ...We are overrunning the planet like an out-of-control malignancy,” and goes on to speak about “the war to save this planet.”

⁴ I argue at length in *Science and the Riddle of Consciousness: A Solution* (Foss 2000), that consciousness can be studied scientifically. It is noteworthy in this context that such scientific study *requires communication* between the investigating scientist and the human subject whose consciousness is being investigated.

doctrines (more or less) accepted by both our mythical spy, Smith, and his military doctor, Holman, (more or less) assured them that if they were ever in a coma and died, they would awaken on the threshold of heaven to be judged. As the great theist philosophers taught, in their new awakening Smith and Holman would be awake as never before, their eyes wide with the heavenly marvels before them: and the interior eyes of their minds wide with every event of their entire lives present before it – *and its moral import*.

This view taught that ultimately all human beings went to their just reward because of their own conscious choices. Unconscious choices, on the other hand, were excusable in the eyes of God – or so Holman believed in May of 1941, when he received orders from Military Intelligence to hand Smith over to them for interrogation and trial by military tribunal. Holman thought in his own mind (and, so to speak, soul), on the basis of hours of communicating with Smith, that Smith was – in all likelihood – suffering from a psychiatric disorder, and hence should be kept in medical care, not delivered to the tribunal, where he might just be bullied into a confession and then hanged.

Should Holman turn Smith over to Military Intelligence, as commanded – or should he countermand MI and keep Smith under his care (with his leaves, presumably, cancelled)? What would happen under either course of events weighed heavily on his mind. Can the psychiatrist of our day, or any other sort of officially authorized professional psychologist, tell Holman what would happen? Can she/he tell us the likely outcome as concerns any major ethical or legal category like Smith's likeliness to do good or evil, to abide by law or become a criminal, *aut cetera*?

As self-proclaimed scientists, social scientists grant that human beings are precisely the biological species *Homo sapiens*, thereby granting the *universal ontological dominion of physics*. But even if they (and we) grant the universal rule of physics – even over the human being itself – they nevertheless are not forced (and we are not forced) to “reduce” the human being to physics. And while this fact may – or may not – impress a majority of professional psychologists, it is crucial as far as the *professionally sanctioned* actions of the social scientist are concerned, for human beings must be treated with respect, even if that respect is not commanded by God (but see Rollins 2006 for the many transgressions of this rule). This is, as it were, partly a *legal reality* for most practitioners who will read these words: the psychologist cannot harm people in either their therapeutic or in their research practice. But it *should* also be a *social, political, and moral reality* as well.

6. The constant advance of science into human nature and life

And yet we are gradually being reduced to physics, nevertheless – even if this reduction can never be complete. This is most obvious when it comes to our bodies: the heart, after all, is a mere pump, and can be replaced. Of course our replacements are always crude and in many ways inferior to the healthy organ itself – but the main point remains. Lamettrie (1748) must be granted his point when it comes to the muscles and bones, the heart and lungs. But our minds are being reduced to physics, too, though the reduction is less dramatic. We now know, for example, that the murder of 16 people by a Charles Whitman, who killed them in

My account is not unique in the respect (see, e.g., Dennett 2003). Given that this is so, what I call *personal knowledge* will be an essential part of the social sciences – as will emerge towards the end of this essay.

shooting rampage at the University of Texas in 1966, was caused by a tumor in his brain. He kept a diary detailing his gradual conquest, despite his struggles, by a compulsion to kill. So these were not murders, (criminal acts), but killings (deaths by the hands of one criminally insane). Nor would I (or you, probably) hasten to call them immoral acts either, for the killer was obviously a victim of *moral luck* in Thomas Nagel's sense (Nagel 1979): he was no worse than you or me—until he got his tumor. Long before his fateful deeds, he reported a growing compulsion towards killing, a compulsion of which he was ashamed and for which he sought treatment.

David Eagleman says “criminals should always be treated as incapable of having acted otherwise” (Eagleman 2011, p. 177)—hence with respect, even if we feel we must take measures to quarantine them for reasons of public safety. Such quarantined (not imprisoned) victims of socially unacceptable diseases (who in the 1960s were treated as “criminally insane”—a phrase which now sounds oxymoronic) are to be treated like other patients insofar as their behavior permits: friends and family can visit, and even bring a cake or a television set as a gift. Just because one's (psychological or social) disease causes harm or death does not mean one should be chained or mistreated. We agree that carriers of harmful or even deadly diseases must be accorded the same human rights as you or me: Why would victims of brain diseases be any different than victims of diseases in other organs of the body? So Lamettrie must be granted his due even when it comes to our minds. A social scientist who does not accept that the mind *is* the brain must, after all, reject modern biology and modern medicine, and to that extent does not accept that a person is made of atoms and so must reject physical science as well. So such a person would have little claim—and even less motive—to be a scientist.

But when we, for example, permanently quarantine a pathological killer, are we to think of him or her as a machine? No. Not an ordinary machine, anyway, for ordinary machines do not have rights. How then? That is a matter of debate. Rorty (1989) argues that all humans who speak deserve being listened to sympathetically, like R. D. Laing (1971) who professed we should listen sympathetically even to the insane, and countless others before and after. As we are all *informavores*, we cannot claim to understand each other unless we access the information we communicate to each other—unless, that is, our knowledge is *personal knowledge*.⁵

But how are we to sympathize? Can we truly put ourselves “in the shoes”, as they say, of the pathological killer? Can we imagine ourselves freely choosing what to eat and where to go but nevertheless unable to prevent ourselves from killing other human beings? If, as seems likely, human beings are quite diverse, then we will have difficulty *sympathizing*—feeling the same way as—those people we are used to describing as bad, evil, criminal, or perverse, like the pathological killer. If not sympathy, then what motivates us to advance the rights of the pathological criminal? Is there another basis for human *respect*?

Some social scientists still employ the ancient link between freedom and dignity (so convincingly critiqued by B. F. Skinner in *Beyond Freedom and Dignity*, 1974). As Stephen Pinker says, even though our actions finally are caused by factors outside of our control, we

⁵ As noted before, personal knowledge is a theme in this essay to which we will return towards its conclusion.

approximate free beings (Pinker 1999, p. 56). It is, I suggest, only because of this approximation—in particular our unpredictability—that even scientists like Holman and soldiers like Smith were able to believe in the existence of their souls and the freedom it bestowed. Some still believe the human soul exists, as is their right under both our laws and customs. Even scientists, I suggest, can still harbor such a belief, braced by the scientific fact of our unpredictability, as argued by William James (1884), who redeveloped Pascal's argument for letting the heart lead the head for a more scientific age. If, even under ideal conditions, we could precisely predict the behavior of one person making morally relevant decisions, second by second, with anything like the precision we predict the trajectory of a thrown stone, then we could justifiably surrender our own freedom-and-responsibility (for the two come as a married couple). Only then would the evidence speak clearly against our freedom, only then would human beings be "reduced to physics" (Foss 1987). Only then could I find it in my heart to forgive myself for something for which I truly felt guilty.

Our shame, our guilt, can be a precious thing, and not to be sacrificed at the first thunderings of causal determinism. It is a pain, a shrinkage of oneself in one's own eyes, a sickness and trembling that comes with the taste of ashes and death—and yet that bears the amazing power of rebirth: *Real* guilt, the guilt *I* feel for my own wickedness, that which makes me look down in disgust upon myself as if from on high, *that* guilt carries the shock required to change one's self.

We are the only animals who blush—or need to, as Mark Twain observed. We are such intensely social animals that we are wired up to reveal our own guilt with a flash of red in our very face so that our transgressions can be spotted by our loved ones and neighbors (Ridley 1996, p. 139). We all wear our hearts on our sleeves, smiling, frowning, laughing, crying—and flashing red to reveal not only bad things we have done (shame) but bad things we bear indirect responsibility for (embarrassment), things such as rude behavior of our compatriots.⁶ But this too, as a biologically determined item of one's own nature—and let's be clear from the start that not everyone (in particular not the psychologically pathological) blushes at the same things—is a trap from which we may wish to escape: thus reaffirming our freedom to *will* what we want, despite our inborn nature. We have turned *evitability*, to coin Dennett's perceptive wordage (2003), into a high art. Some of us have not only learned to suppress the race of hot red blood to our face, but even the racing of the shamed heart hidden in our chest.

And yet we cannot deny the advance of social science in explaining human behavior. We face what Dennett has so aptly tagged as the "Specter of Creeping Exculpation" (2003): as the credibility of the neural mechanisms driving us advances, the concept of responsibility must correspondingly retreat. The retreat of responsibility does not mean, however, that we must retreat in the face of human violence. If the pathological killer cannot be relied upon to police her/himself, as it were, then we cannot permit her/him *freedom* in the moral, social, political, and legal sense. Even the most aggrieved parent of the most innocent victim of such a killer has no right to vengeance against the killer—but only because the act was *unfree*—unowned by any fully capable person. The pathological killer has lost the moral credentials to own her/his killings—the freedom and responsibility—a credential that is

⁶ The similarities and distinctions between shame and embarrassment are clearly drawn by Bedford (1964).

required to walk freely among us. But it does not follow that she/he has forfeited her/his *respect* as a human being.

But we do not accord respect to mere mechanisms! If there is a pathological mechanism inside the killer, then should we cut it out? Should we remove it—if only we can—through treatment, therapy, drugs, surgery, whatever? We would do that with a cancer, why not with a cancer of the very essence of human dignity: freedom (and its logical spouse, responsibility)? Well, again, as Rorty says (1989), even the most “irrational” among us deserves to be heard—even if we struggle to comprehend.⁷ For we *are* informavores. Not only our blushes, but also our words bear *information*, are species of the *eidōs* that flow among us—and not only us, but amongst all living things. For DNA, too, is pure structure. Each individual strand of the DNA in our body (where “our” now signifies all living things) must go the way of all flesh, and decay. But its *form*—its *structure*, will go on in our kin, the torch of life in their bodies (whether single-celled or trillion-celled, whether plant or animal, whether healthy or pathological).

Which brings us back to the point: our exculpated killer may refuse our treatment, our psychotherapy, our surgery, no matter how pathological her/his desire to kill may be—and no matter how personally hellish it may seem to her/him when viewed through the aspect of her/his own guilt, shame, or embarrassment. Even if the desire to kill is felt with lust and rejoicing, the pathological killer has the right to deny treatment, just as she/he would for a cancer. We have no respect for her/his disease, but for her/him. This is not to say that we must go to any length to protect and nourish her/him: If faced with saving either our own children or her/him from fire, we might justifiably save our children. On the other hand, we do not simply kill or chain her/him either.

Let’s not try to argue this here, let’s instead return to the certainties of our mythological Smith—who, as it turns out, has also committed a crime, a crime at least as grave as murder. Holman, his military doctor, had interviewed Smith at length in his psychoanalysis, and knows beyond a shadow of a doubt that Smith aided, abetted, and protected Z, the seductive Nazi spy he had been seeing on his week-end leaves. In fact, Smith helped her to escape arrest, which was treason, a hanging offence in wartime (the legal and moral equivalent of murder of one’s fellow citizens). But Holman knows that a crime is a crime *only if* the act is free. Smith knew what he was doing, understood the consequences of his actions, and knew they were wrong—but his actions were not under his voluntary control. On the basis of his analysis of Smith, Holman believed—or thought it likely—that Z was a dominant personality who controlled the psychologically wounded Smith in a pathological sexual relationship. (Though Holman would have laughed at the idea that he accepted Adler’s psychoanalytic theory, like many other medical men of his day, he had nevertheless absorbed some Adlerian concepts in his schooling as a mere restatement of common sense.)

⁷ Rorty suggest that the ancient epithet of “irrationality” is always used whenever someone insists on disagreeing with us despite listening to our arguments—but that it carries no logical weight. While I recommend Rorty’s arguments for your consideration, I would also remind us all that the concept of rationality began with Pythagoras, who thought that all reality was composed of numbers, and all relations between things were expressible as whole number *ratios*—a charming antiquity of thought, but completely insupportable given what we now know.

So Holman refused to release Smith. Did he do the right thing? Holman was *quite* sure he had. Smith must be afforded the presumption of innocence, and given that presumption, along with Smith's inferiority complex (as Holman conceived of it), there was no proof of any crime on Smith's part. And yet, Holman still had his doubts. Spying was serious business in wartime, when innocent lives were at stake. But in the end he simply couldn't overcome his own *ignorance*, and no amount of reflection and worry could overcome his sheer *lack* of understanding. People were such mysteries. He had listened to Smith's account of what he had done so often and so well that he felt he really did understand him – and yet he couldn't be absolutely sure what he might do, or what he was capable of doing. But, as we now understand more thoroughly: No one can.

Mysteries humble the scientist, and Holman's humility made him incapable of tossing this man he had come to know into the efficiencies of military justice.

7. Social science is more than mere science

And so, let us return to our question: are the social sciences really sciences? The answer, I propose, is yes. The social sciences are empirical sciences in the most pure and simple sense: they aim at understanding *Homo sapiens* by empirical study and the development of laws, representations, maps, predictive models, etc., of human phenomena that are judged by the precision of the model, the accuracy of its correspondence with observation, and its completeness relative to the questions posed.⁸ Like many physical sciences, such as meteorology, turbulence studies, geology, river hydrology, quantum mechanics, and so on, the social sciences are barred from ever becoming perfectly precise. Only simple systems can be predicted with infinite precision—whether in physical science or social science. The elements behave in elementary ways, but complex structures behave in ways that outstrip our ability to handle the variables or make the complex calculations tracking their interactions. This is true for the weather, for rivers, and for human beings.

Never lose sight of this fact: Only we care where the boundary is drawn between social science and the other sciences. We are unique in this regard—and in so many others. For one thing, it is quite plausible that we are in fact the most complex phenomenon we have yet found in the universe. For another, there is no guarantee—indeed no good reason—to believe that our intelligence is capable of understanding itself. Intelligence may always be more complex than it is smart. In any case, we observe deeply rooted physical constraints on our own self-knowledge. To the Socratic maxim, "Know Thyself!" science has after many centuries replied "Impossible!"

To this, Socrates has already stated his counter-reply: If I am wiser than other men it is because I know that I am not wise. The world remains a mystery, and we remain mysteries, so Socratic wisdom remains wisdom.

So, yes, the social sciences are truly sciences, even though their subject matter is mysterious—in that they are not alone. But social science is also integrated into our systems of education, medicine, justice, politics, economics, etc.—and this gives it great power, hence

⁸ I discuss and defend a view of science as modeling of nature aiming for precision (of what the model says), accuracy (agreement of what it says with observation and measurement), and completeness (including what we want to know or understand) in Foss (2000) ch. 2; and Foss (2008), ch. 6.

great responsibility. Power must be exercised with *humility*, in the face of the mystery of being human. For this mystery, though proven by physical science, is not even *expressible* in the language of physics or chemistry. Physical science examines the things of this world in terms of their physical parameters, but *meaning*, the collection, transformation, storage, communication, etc., of *information*, is not captured in physical parameters. The physical parameters of the words “Second world war” on this page do not causally connect them to the trillions of events of which that sorry human conflagration was comprised. It is instead your *understanding* of them that permits you to think of that war, which no longer exists, lost on a point in time and space now perfectly inaccessible to anything other than thought—through its meaning.

So social science is really and truly science—but not *just* science: it is *more* than science for it also includes—and *must* include—the phenomenon of information, and hence meaning. This takes it beyond the boundaries of science as understood in the physical sciences. In addition to this special feature of social science, which concerns mainly its epistemology, metaphysics, logic, and method, the *de facto* social role of the social sciences gives it a special ethical feature as well: a responsibility for how we treat each other in our thoughts and institutions, particularly in education, medicine, law, and politics.

The ethical impact and responsibility of the social sciences is drawn out in our myth of Smith, for meaning is the essence of the myth. It was not the physical parameters of the *sound* of the words “Your mother is dead” that struck him down—it was their *meaning*. And it was the meaning of Smith’s words, produced in response to Holman’s analysis that enabled Holman to *understand* Smith, not as an object but as a human being—whether a fellow or not.⁹ Let us call this form of knowledge *personal knowledge*. It was in their mutual search for meaning and their partial success in discovering it and expressing it that Smith and Holman came to know *each other*—and such personal knowledge convinced Holman he mustn’t turn Smith over to Military Intelligence.

8. Seven morals for social scientists in the field, laboratory, or clinic

Let me hasten to my morals—even before coming to my conclusions, which in the nature of philosophical exercises of this sort, must cast light on the world so that each illuminates the morals drawn.

Seven morals¹⁰ for social scientists

1. **The social scientist is humbled by the human being.** This humility is both *objective* (there are significant restrictions on the social scientific quest for knowledge) and *subjective* (the social scientist is imbedded in a culture that respects human beings ethically and legally).

⁹ “Fellow human being” has the sense in English of both one’s fellows—or kinship/ethnic/tribal/friendship connections—qualified generically by human: thus that all humans are fellows.

¹⁰ A moral is a form of moral guidance offered as a gift, rather than forced upon its intended recipient as proven (as the word of God, logical necessity, the laws of reason, rationally presupposed, in accord with scientific law or fact, consistent with reason, etc.).

2. **Human freedom is worthy of respect.** One form of respect of *Homo sapiens* for *Homo sapiens* that we hold dear is that expressed and enforced in the enlargement or the restriction of human freedom of action (by which I mean your freedom to *do* such things as move about unobserved, have and care for children, accept patients; and your freedom *from* such things as arrest, imprisonment, punishment).¹¹ Social scientists enjoy enlarged freedom of action and responsibility—while at the very same time those among us who suffer from ethical or social dysfunction have restricted or curtailed freedom of action and responsibility.¹²
3. **All human beings should have some humility.** Ignorance is a human imperfection, an essential aspect of our nature—an embarrassment that is the font of philosophy, which Socrates therefore loved to expose in all of its pathos and grandeur—and for which he paid with his life, for we so *hate* being embarrassed. We professors of this modern era are no exception. Do you, Dear Reader, profess to be wise—so wise as to restrict the freedom of action of your adult fellows? Of course you do! We all do. Social scientists not only acquiesce to the institutions or childcare on the one hand and imprisonment on the other, but contribute to standards under which these institutions operate through education, clinical practice, professional advising, and so on. Social scientists not only *do* but *should* influence the constant evolution of these institutions and standards in view of their increasing understanding of humankind. This influence should be exercised with humility.
4. **Humility is the basis for respect.** The essence of respect (as opposed to fear or ritual deference) for another is humility: the sense that one is not so great that the wishes and feelings of the other can be disregarded. Respect is the emotional heart of equality: the sense that the other is at least one's equal, if not one's better.
5. **Humanity deserves respect.**¹³ Because humility presupposes so very little, nonbelievers of all stripes must also respect *Homo sapiens*, for no knowledge of God or evolution, economics or ethics, anthropology or sociology, neuroscience or psychology, psychiatry or law, is required. Ignorance alone commands humility. Human action, and the hells and heavens we produce for each other, entail the same respect for ourselves that we have for any other natural phenomenon, whether the wind, ice-ages, or cometary impact.¹⁴ *Homo sapiens*, we, you, and I, Dear Reader, are capable of both great good and great evil, both awesome beauty and gross ugliness.
6. **The most important form of understanding of each other is personal knowledge.**¹⁵ Personal knowledge, the knowledge we gain from communication with each other, is

¹¹ Freedom of action in this sense is the fundamental sense of freedom for the human being, the sense of freedom he shares with other animals (and even plants), which I identify as *natural freedom* (Foss, 2008, ch 7).

¹² John Rawls (1971) is famous for arguing that extra freedoms and responsibilities for some citizens are justifiable if they work to the advantage of the population as a whole.

¹³ Kant's famous moral dictum (the categorical imperative) says, "Always treat humanity, whether in yourself or another, as an end in itself." This highest level of respect Kant also sees as linked to human freedom (although he conceives of freedom metaphysically, rather than pragmatically as I do here). Thus, Kant's doctrine is quite similar to what I profess here—although his metaphysical arguments presuppose far more than the Socratic arguments I supply here.

¹⁴ Beauty and awe marks the domain of the naturally sacred (Foss 2008, ch. 7): life, consciousness, and caring.

¹⁵ Michael Polanyi still provides the most important study of the role of the individual person in knowledge in his book, *Personal Knowledge* (1958). Although he mainly restricts his account to the

based on a feature of *informavores*: transmission of information between individuals or groups. Social scientists may sometimes deny themselves this form of knowledge of their subjects to avoid bias in the pursuit of *knowledge*, but *wisdom* is the sole basis on which we may restrict (or enlarge) each other's freedom. Wisdom requires that we avail ourselves of the information available solely through communication among us before restricting (or enlarging) each other's freedoms.¹⁶

7. **Human life is enlightened by freedom, humility, respect, and personal knowledge.**¹⁷

9. The pro-verbial bottom line

So what finally happened? Did Smith eventually arrive at outcome₁, becoming a Nazi spy, or outcome₂, becoming a British spy? Obviously, there is no way to say: This unpredictability is a defining feature of our myth. To decree how this story ends runs contrary to its deepest message for the social scientist: We human beings are mysteries, so we if we investigate ourselves scientifically, it must be done with humility, respect, and fellowship.

So in all humility, based solely on my own personal knowledge, including insofar as possible my personal knowledge of you, my colleagues amongst those social scientists of whatever sort who still recall that you are philosophers in pursuit of Socrates' quest, I will choose two of the infinitely many paths Smith might possibly take to our two outcomes, like two shiny stars in among the myriads in the heavens, for you to throw out or keep, contradict or transform, be disappointed by or pleased—as unpredictably as you will. Please, do with them as you will. And please accept my most humble invitation into my abode, philosophy, if you have an ending of your own that leads to one of the two outcomes—for playfully engaging in such conceptual exercise was one of the original Academic pursuits: Lest Socrates die in vain.

1. Holman acted on his decision to withhold Smith from Military Intelligence by refusing to sign his release, insisting on the primacy of his authority over his patient. In response, Military Intelligence overruled Holman's command at a higher level, and sent an armed guard to take Smith in defiance of Holman's authority. Eventually, Smith was convicted of treason and imprisoned for 15 years.

physical sciences, it is in accord with the account given here, which extends his insights to the social sciences, where the scientific subject is an *informavore*. Cheryl Misak (2000) extends the account of personal knowledge among human beings to include the constitution of the state itself—following Polanyi's lead in *Science, Faith, and Society* (1946).

¹⁶ Among adults these restrictions range from quarantine to imprisonment. Quarantine presupposes respect, and thus involves no punishment, while imprisonment presupposes neither respect nor refraining from punishment. Among children, and given the assumption of respect for children, restriction on action range from manual care (dressing and feeding of the infant, keeping toddlers in a playschool classroom, denying adolescents phone—or other—contact with a sexual suitor) through verbal care (education, control of skill sets, friendships, and ideas).

¹⁷ One of the most amazing examples of this enlightenment is given by Green and Bigelow (1998), who explain how during the Basque witch-hunts of 1609-14, Bishop Salazar came to the understanding that so-called witches were just ordinary human beings like himself, through person-to-person interviews with accused witches—though his conclusion was contradicted by the substantial *science* of that time which provided rich empirical evidence for witchcraft along with rich theoretical support. Such is the power of human communication: it can reveal truth even in the darkest depths of ignorance and superstition.

2. Holman acted on his decision to withhold Smith from Military Intelligence by introducing himself to the officer from Military Intelligence who had come to get Smith, and inviting him, Major Turn, into his office for a drink. There he began to tell Turn about Smith, as one judge of the common soldier to another, and found him quite receptive. Major Turn was especially intrigued by Holman's suggestion that Smith was deeply patriotic, but so overpowered by his own feelings of inadequacy that he compensated by *acting* as though he didn't care. Turn asked to speak directly with Smith, Holman agreed, and Smith and Turn hit it off, as they say. One thing led to another, and eventually Smith had reestablished his contacts in Z's circle—only now as a double-agent for the British. Smith became a decorated war hero, and eventually retired to live with Turn.

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Karl Popper and the Social Sciences

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1. Introduction

The social sciences have a rich tradition, as shown by its various authors and theories found throughout written history. In the 1st century BC, for example, Seneca the younger stated that “human beings are social animals” (*Cl.*1.3.2). Not long before, in the 4th century BC, Aristotle insisted that “man is *by nature* [emphasis mine] a political animal” (*Pol.* 1.1.9). This chapter focuses on Karl Popper, a contemporary social thinker. Popper represented one of, if not, the most prolific authors that articulated the status of the social sciences. While Popper (1950/1971a, 1950/1971b, 1959/1992, 1963, 1972, 1982, 1983, 1991, 1996a) produced an extensive body of literature devoted to the social sciences, he has been given too little attention in modern social science historiography. Even though he “concentrated mainly on practical problems of the methodology of the social sciences” (Popper, 2008, p. 87), textbooks of social science methodology rarely include Popper’s writings. Consequently, his works on the social sciences and/or psychology, including his dissertation, remain largely unknown.

This chapter explores the heretofore unexplored social themes that arise and recur in Popper’s writings. To begin to redress this gap in the Popperian scholarship, Popper’s (2008) recently published posthumous work is of particular interest to our discussion. I pay close attention to parts IV and V of this milestone book, which contains several of Popper’s unpublished materials concerned with social issues. These materials were collected from various archives preserved respectively at Stanford University (USA), University of Canterbury (New Zealand), and Klagenfurt University (Austria). In addition, Popper’s correspondence with the philosopher Rudolf Carnap (see Carnap’s archives at the University of Pittsburg, USA) are included. Because the scope of this project is limited, further work is necessary, especially publication aimed at unearthing Popper’s materials that are housed at the London School of Economics and Political Science. Indeed, the entire catalog of Popper’s archived work represents an enormous amount of unpublished materials that cannot be adequately or faithfully reproduced in a single book chapter. It is important to warn the reader that Popper’s oeuvre, and in fact, all his books (perhaps with the exception of *Forschung der Logik*) are comprised of a mélange of papers and drafts, written in a variety of genres, including lectures, correspondences, conference presentations, and drafts. Even though the majority of his work was written in English, each text was written under different circumstances, at different times, and for different purposes.

With such a prodigious catalog to take into consideration, a thematic approach makes the most sense. I have therefore made efforts to focus on Popper's themes that respond to the goals and scope of the present book chapter. Along the same lines, it is worth noting that "Popper's work has been among the most controversial, and influential, in twentieth-century philosophy" (Catton & Macdonald, 2004, p. 1). It follows that my aim is not to provide a complete explication of Popper's work, but instead, I offer an introduction/invitation to Popper's often forgotten contributions to the social sciences. After a quick biographical sketch, five key concepts will guide our reflections: (a) Popper and the world, (b) Popper and the social sciences, (c) Popper and society, (d) Popper and science, and (e) practical considerations.

A recent biography of Popper's life (Hacohen, 2000; Popper, 2008) sheds light on the underlying motivations of his work. Popper (1902-1994) was born and grew up in Vienna in an upper-class family, although neither of his parents were Austrian. His father was a Czech lawyer who settled in Vienna; his mother was Hungarian. Though they were Jewish, the family converted to Lutheranism. In 1928, Popper obtained his PhD at the University of Vienna in psychology of thinking, under the supervision of Karl L. Bühler (1879-1963). Bühler was the leading figure of Gestalt psychology at the time (ter Hark, 2003, 2004a, 2004b, 2006, 2009), which greatly influenced the development of Popper's social reflections. When the Nazis took power in 1937 in Germany, Popper migrated to New Zealand where he taught at the University of Canterbury in Christchurch. In 1946 at the close of World War II, he returned to Europe, and took a post at the London School of Economics and Political Science (University of London), and later he held several teaching positions in the US. Popper had a difficult life in Austria where he didn't feel at home: indeed, he lived as a foreigner for most of his life, and in 1994, he died as a foreigner as well in the outskirts of London. Discouraged by publication challenges, he was virtually unknown in academia and to the general public. These hardships are important to bear in mind in order to best understand his thoughts and writings. More precisely, the struggles for survival and the Nazi extermination of ideas, institutions, and populations foreground Popper's thoughts and works.

2. Popper and the world

To understand Popper's social theories, it is necessary to grasp his foundational ideas about the world (Popper, 1959, 1988). Popper distinguished three groups of worlds: (a) the physical world (world 1), which is the exterior and cosmic world, (b) the world of mental states and subjective knowledge (world 2), and (c) the world of social and recorded knowledge (world 3). World 1 concerns the cosmos and accompanying physical forces. World 2 involves the mental and subjective experiences of humans and the minds and feelings of animals. World 3 embraces social phenomena, namely: culture, language, laws, customs, and institutions, all of which are found in a recorded form of knowledge (e.g., utensils, houses, books, masks, tablets, and the like). Though interrelated, the three worlds are each autonomous and objective in that they can be tested and demonstrated independently from the subject. The tripartite cosmology provides the groundwork from which to understand the Popperian division of sciences. Inexplicably, authors tend to understand Popper's classification of sciences separately from his worldview, although these classifications are essential to understanding his social tenets as well. We will discuss the characteristics of science and social sciences below, but for now, note that the natural

sciences are conceived of as belonging to world 1, whereas the human and social sciences correspond to world 2 and world 3, respectively.

Even though each of the three worlds designates particular categorical qualities, each world can be connected with the same object at different levels. To illustrate, a book can be considered as a physical object, and for that reason the book belongs to world 1. As a physical object, the book, consisting of paper, ink, illustrations, and a cover, manifests a series of physical properties of the cosmos. However, the meaning of the printed words, as well as any comments and annotations made in the book, belong to world 2, since they represent the mental states of the author and readers, which correspond to a series of physical forces/entities. The content of the book is conveyed through forms of recorded knowledge (e.g., alphabet, paragraphs, and chapters, etc.), which belong to world 3. Recorded knowledge represents specific social institutions, such as publishing houses, libraries, universities, research centers, and nations, with each one performing specific activities, complete with their own force, and each of these social institutions operates within and through specific facilities. Popper envisaged a world 4, comprised of arts and related objects, although he came to include its material in world 3 since art represents recorded knowledge. For Popper (1988), all the worlds together in aggregate form are an open universe—a universe of indeterminism, with unrestricted freedoms and unrestrictive theories. For this reason, Popper characterized scientific work through the rubric of its contributions to the world.

We will discuss the idea of open universe when we get to the concept of society, for now bear in mind that, as pointed out above, the three worlds pave the way to the classification of sciences.

3. Popper and the social sciences

In his later works, Popper (1991, 1996a, 1996b, 2008) devoted expansive and in-depth literature to describe the human and social sciences. Popper understood the social and human sciences to be interchangeable in order to best defend their scientific character, which is commonly thought to be subjective, weak, non-measurable, etc. (see Little, 1998; Rosenberg, 2008; Wallerstein et al., 1996).¹ In Popper's logic, three dominant concepts characterize the social sciences as: (a) scientific, (b) objective, and (c) empirical. First, Popper understood the social sciences as sciences in the full sense of the word, a position that attempts to refute the widespread idea that the social sciences represent a weak form of science. Discussions of the scientific status of the social sciences (their methods, theories, and laws) are usually impaired by the common misunderstandings that authors entertain about physics and its laws. The point behind those misunderstandings is that

physical laws, or the "laws of nature", are valid anywhere and always; for the physical world is ruled by a system of physical uniformities invariable throughout space and time. Sociological laws, however, or the laws of social life, differ in different places and periods. (Popper, 1991, p. 5)

Popper's statement critiques the view that physical laws are more universal than the laws of social life. This view lacks empirical evidence and reveals a restricted understanding of both

¹ For further discussion about the difference between the human and social sciences see Cibangu (2010b).

the cosmos (world 1) and the social world (world 3). Remember that all three worlds are made of autonomous and objective physical entities. The laws of physics are the same in each of the three worlds. Therefore, by the virtue of their object of study, the social sciences are objective. Popper (1991) elaborated, “although historicism admits that there are plenty of typical social conditions whose regular recurrence can be observed, it denies that the regularities detectable in social life have the character of the immutable regularities of the physical world” (p. 5). One needs to bear in mind that historicism in the Popperian sense is different from that encountered in social science literature. According to Popper (1991, 1971a), historicism states that human history involves regularities and patterns with which the evolution of society can be understood and predicted. In this sense, historicism simply means evolutionism.² The social sciences seek to pinpoint the regularities hidden in the physical processes of the social world with the goal of crafting newer problems and newer theories. Popper (1996b) explained,

The method of the social sciences, like that of the natural sciences, consists in trying out tentative solutions to those problems from which our investigations start. Solutions are proposed and criticized. If a proposed solution is not open to objective criticism, then it is excluded as unscientific. (p. 66)

Note how new problem-solving criticism, variedly called critical method, deductive logic, critical discussion, critical rationality, or rational criticism, characterizes all sciences, both social and natural. Certainly, scientific work involves testing proposed hypotheses and theories, while critical discussion leads to these tests.

I consider it important to identify scientific method, at least in first approximation, with the critical method... The method of science consists in the choice of problems and in the criticism of our ever tentative and provisional attempts to solve them. (Popper, 1996b, p. 74)

Criticism of encountered puzzles and suggested theories constitute the unifying method of sciences. However, this methodological foundation of sciences has been understood to indicate the uniformity of methods and disciplines.³ A quick semantic clarification may help advance the discussion. I should emphasize that the word method is an ambivalent concept found in social science literature. Not surprisingly, what Popper meant by method is often different from what authors and readers expect, and even more confusing, the term can hold fluctuating semantics within the same book. Furthermore, Popper did not supply a definition of the term, although he attempts to circumvent misunderstanding with the statement: “I do not intend to assert that there are no differences whatever between the methods of the theoretical sciences of nature and of society” (Popper, 1991, p. 120). In this specific context, thorough textual review reveals that Popper understood method as a fundamental and underlying strategy of science. Perhaps an analogy will help to illustrate method as a fundamental and underlying strategy. For example, the fundamental strategy for athletic success is competitiveness. However, while competitiveness is an underlying strategy for athletic success, it does not follow that athletic success is limited to one set of

² Some of the sources on evolutionism and Popper’s historicism are Cibangu (2009) and Urbach (1985), respectively.

³ See Verdugo’s (2011) recent article for sustained discussion about the unity of methods according to Popper. For the use of the word method see Cibangu (2010a).

rules, one set of techniques, and identical methods of scoring. The unity of fundamentals does not exclude the diversity of methods.

The second dominant concept, perhaps the most challenging in Popper's literature, is that Popper considered the social sciences to be objective. As noted earlier, Popper placed the social sciences in world 3, which contains definite physical entities/forces. These physical entities, which he also called propensities (Bächtold, 2006; Popper, 1990; Runde, 1996), confer an objective character to the social sciences. For this reason, the social sciences provide us with an objective understanding of the social world. Popper (1996b) refuted the misunderstanding that

objectivity in the social sciences is much more difficult to achieve (if it can be achieved at all) than in the natural sciences. For being objective demands that one is not biased by one's value judgments... But only in the rarest cases can the social scientist free himself from the value system of his own social class and so achieve even a limited degree of "value freedom" or objectivity. (p. 68)

Against this misunderstanding, Popper situated objectivity in a much more communal and inter-subjective sense than is usually perceived within the natural sciences, wherein the researcher is often seen as the sole center of science. Locating objectivity in an inter-subjective way highlights the social world of science as necessary to ensure objectivity itself, since the exchanges that happen in such inter-subjective engagements as peer review and criticism, can filter out biases. Further, Popper rejected the idea of science that is merely a matter of personal choices and preferences, though he allowed that personal choices and preferences can potentially be part of the research process. He noted,

It is completely erroneous to believe that the attitude of the natural scientist is more objective than that of the social scientist... The objectivity of science is not a matter for the individual scientist, but rather the social result of mutual criticism, of the friendly-hostile division of labour among scientists, of their co-operation and also of their competition... Objectivity can only be explained in terms of social ideas such as competition (both of individual scientists and of various schools of thoughts); tradition (that is the critical tradition); social institutions (for instance, publications in various competing journals and by various competing publishers; discussions at congresses); the power of the state (that is, its political tolerance of free discussion). (1996b, pp. 72-73)

Objectivity, then, is not a goal in and by itself, nor the achievement of an individual scientist, but a nest of autonomous, objective, and physical entities of world 3, namely: communities, groups, institutions, and venues that criticize the researcher's proposed theories. Objectivity derives from the combination of these social and physical forces. In other words, objectivity is the byproduct of critical inter-subjectivity such that the subject does not command on his/her own. As explained earlier, the social world carries physical forces with it. Most pertinently, Popper referred to *verstehende Soziologie* (see Cibangu, in press), as a sociology of objective understanding. Objective understanding rests on the hermeneutic tradition of inter-subjective interpretations and criticisms, the product of which is not bound to an individual's opinions and preferences.

Social institutions determine the peculiarly social character of our social environment. They consist of all the social realities of the social world, realities which correspond to

the things of the physical world. A grocer's shop or a university institute or a police force or a law are, in this sense, social institutions. (Popper, 1996b, p. 80)

Just as objective statements of the natural sciences involve physical entities of world 1, objective statements of the human and social sciences also involve the physical entities of world 2 and world 3, respectively. The social entities embody the fabric of inter-subjective exchanges, of which the social sciences endeavor to show the (objective) understanding. To be clear, a more telling expression with which to determine objective understanding might be that of *trans-subjective* undertakings. The understanding obtained in the social sciences is one that reflects a trans-subjective (i.e., beyond-subjective) reality.

The third and last concept that characterizes the social sciences is empirical (Popper, 1959; Shearmur, 2006). While doubt can be raised as to whether the social sciences are empirical or non-empirical, Popper classed the social sciences as empirical. A close look reveals that Popper held two major lines of thought as to what constitutes an empirical approach. On the one hand, Popper understood empirical sciences in the traditional sense; that is, the sciences that deal with experiment and observation, using induction as their sole method of analysis. Also called applied sciences, these represent the sciences that Popper was most critical of. The traditional sense of empirical sciences reflects the 17-19th-century model that depicts science as a replication of natural laws and theory as a non-sense. On the other hand, Popper took the empirical sciences as ones that go beyond the limitations of inductivism. Popper's view heralds the methodology of modern empirical sciences. Popper rejected inductivism as the conduit of universal truths. Popper's now canonical example of inductive reasoning is helpful here: imagine that a researcher observes all of the swans in the world, and one by one, found that every swan is white. According to induction, the researcher is allowed to conclude that all swans are white: the conclusion is therefore valid, since it proceeds from a higher number of observed particulars to a universal statement. Popper found such typical inductivist conclusions implausible. Even if the researcher has found by inductive experiments that all *observed* swans are white, the veracity of the statement, all swans are white, is not guaranteed. In other words, the conclusion that all swans are white is simply a situational statement, *not* a universal truth. For example, there may have been red swans two millennia ago, or, there may be grey swans in the future, or there may be brown swans in a location unknown to the researcher. This shows that experimental inductivism is always context-bound and cannot lead to universal truths.

Because observation is limited, researchers use deductive reasoning, applying principles of logic to come to a conclusion. However, with deductive logic or deductive induction, particular statements lead to a particular understanding of the situation at hand. Logic deals with the case analysis of particular situations (see Cibangu, in press). At the same time, deductive logic can lead to statements that are stronger about, and nearer to the truth, than are the statements derived from, and limited to observational context. In this respect, the second kind of empirical sciences involve deductive logic through the test of theories. Popper understood deductive logic to be the characteristic of science. The scientists' role "is to analyse their logical consequences [of statements]: to point out their fertility – their power to elucidate the problems of the theory of knowledge" (Popper, 1959, p. 38). Even though induction and deduction are inadequate on their own, Popper showed that in combination at the logical, not experimental, level, they lead to stronger conclusions and stronger methodologies. Putting both kinds together, Popper (1959) viewed empirical sciences as

ones that engage experiment and/or the testing of theories. The endeavor to test theories consists of critically/logically confronting them with empirical evidence. Empirical evidence represents the real world with which humans are confronted. Context-bound observation (inductivism) tends to limit the real world. In essence, empirical sciences are characterized by the following scheme: problems, theories, criticisms, and new problems (see Popper, 1996a, p. 158). The goal is to suggest new paths of research. Though concerned with experience and experiment, empirical is not the end product of science. Science is earmarked by the process of forging newer and newer theories.

One of the most misled tendencies among authors is to view empirical and theoretical concepts as opposite and exclusive. Hence, one would think that the empirical sciences are best undertaken when one avoids the theoretical dimension of research. However, Popper (1996b) noted, "there is no such thing as purely observational [empirical] science; there are only sciences in which we theorize (more or less consciously and critically). This also holds true for the social sciences" (p. 78). Theories represent the hallmark of the empirical sciences, and of all sciences. Modern empirical or applied sciences involve a great deal of theorization. Empirical science simply means that theories are tested and applied in particular circumstances, and under particular forces of the social world. To further highlight the characteristics outlined above, Popper identified one method to be unique to the social sciences, which he referred to as the method of *objective* understanding, or, alternately, situational logic. The method springs from the idea of objective understanding attributed to the social sciences. Popper (1996b) explained,

The logical investigation of the methods of economics yields a result which can be applied to all social sciences. This result shows that there is a *purely objective method* in the social sciences, which may well be called the method of *objective* understanding, or situational logic... Objective "understanding" consists in realizing that the action was objectively *appropriate to the situation*... Situational logic assumes a physical world in which we act. [emphasis in original] (pp. 79-80)

Objective understanding takes us into a world-like environment, the patterns and regularities of which embody logic and/or meaning. The researcher is called to analyze the logic and meaning of the selected situation within the social world.

Situational analysis is Popper's attempt to overcome the interpretive-positivistic divide. Popper (1996a) explained that, "the fundamental problem of the social sciences is to *explain and understand events in terms of human actions and social situations*. The key term here is '*social situation*' [emphasis in original]" (p. 166). Clearly, Popper was of the opinion that both interpretive and positivistic knowledge are needed in order to disentangle the human actions and the physical entities hidden in the situation at hand. Situational analysis transcends the interpretive-positivistic divide, since "the situational analysis will comprise some physical things and some of their properties and states, some social institutions and some of their properties, some aims, and some elements of knowledge" (Popper, 1996a, p. 168). Note the notion of properties (i.e., autonomous physical forces or entities discussed earlier) along with the social and human elements. Certainly, these physical forces imply objective knowledge. With the objective understanding of the patterns behind lived experiences and phenomena, interpretivism goes far beyond the ability to interpret meaning and text, and draws on broader (inter-subjective) independent forces. Situational analysis is a model with which to interpret the patterns hidden beneath

phenomena. While Popper (see 1996a, p. 173) wished to consider situational analysis as the property of the social sciences (Gorton, 2006), situational analysis presents all the right ingredients for the natural sciences as well (e.g., objective, logic, test, hypotheses, experience, etc.). The characteristics of the social sciences seen above make this method of the social sciences a strong candidate for the natural sciences.

Closely related to situational analysis is the concept of methodological individualism. Although strongly supported by Popper, methodological individualism is neither Popper's (1971a, 1971b) concept nor his theory. The method can be traced as far back as to Aristotle's (4th c. BC, 1924) idea that professions and their organizations correspond to human needs. Methodological individualism serves as a channel of objectivity (i.e., inter-subjective exchanges) that situational analysis claims to bring. The idea is that social science objectivity does not seek to supplant individual agency and related particular entities in the name of social collective forces and structures. Therefore, methodological individualism rejects totalitarianism and collectivism (Chalmers, 1985; Gonzalez, 2004). Methodological individualism constitutes in part a response to Gestalt psychology which teaches that the brain as a whole provides explanation for all specific human sensations (i.e., vision, touch, smell, taste, and hearing). Furthermore, Popper's extensive rebuttal against psychologism, is foundational to his social teachings -- a body of work that is largely unknown and remains unpublished (ter Hark, 2003, 2004a, 2004b, 2006, 2009). Popper presented a context-specific explanation of human sensorial phenomena distinct from psychologism. The three worlds, the physical, the mental, and the social, are not a mere human representation, but they each contain entities endowed with autonomous processes.

For Popper, the interpretation of social phenomena must be achieved according to specific relations between autonomous individuals, their actions, and collective bodies. Popper (2008) noted,

Collectivism is here attached to such views as that the individual is unimportant while some "collective body" such as race, or class, or nation, is all-important, if not divine, and the social sciences have to study the structure and especially the movement and the development and the history of "collective bodies". (p. 134)

The espousal of methodological individualism, in rejection of collectivism, speaks to the various hardships Popper encountered all along his life. Popper did not seek to debunk social structures, but to argue for an open society. He urged methodological individualism because "we must try to understand all collective [social] phenomena as due to the actions, interactions, aims, and thoughts of individual men, and as due to [the] traditions created and preserved by individual men" (Popper, 1991, p. 157). Stated differently, trans-subjectivity does not entail totalitarian *trans-plantation* of a group's agendas and preferences onto the rest of humanity, rather, it can mean ongoing affirmation of individuals' agencies and needed physical entities. Trans-subjectivity implies that situational analysis is not about totality and collectivity, but the quality of individuals' lives, their actions, and needed physical entities. In addition, Popper considered academic work to be a tool for making the world a better place, since "it is, however, quite obviously the task of all thinking people to do their best to bring about a better world" (Popper, 2008, p. 289). Methodological individualism privileges each and every individual, with his/her actions, choices, and physical entities.

4. Popper and society

Popper distinguished two kinds of societies; the open society is based on critical discussion about such human pursuits as achievements, decisions, goals, and authority, whereas the closed society does not allow for social criticism, and may even exterminate individuals, their ideas, and properties. Popper believed that “it [open society] introduces a new and practical view of social methodology” (Popper, 2008, p. 110), which resists closed thoughts, structures and actions. For better or worse, the widespread fixation of Popper’s work on the field of philosophy of science⁴ and ensuing debates has led to no small neglect of Popper’s social doctrine. As his key social tenet, Popper fought for an open society, a society in which we are actors of our history and makers of our destiny. It is inexplicable that “most commentators think of Popper and his intellectual legacy primarily in terms of his philosophy of science” (Sassower, 2006, p. 7). The open society gives a markedly social tenor to the wide range of Popper’s thoughts from scientific work, to knowledge and methodology.

In rebuttal against the commonly held idea that Popper’s work falls exclusively under philosophy of science, Popper (2008) clarified the focus of his study, saying,

By inclination and by choice, my fields of study are the natural sciences – physics and biology – and especially their methods. Yet I came to think seriously about [the] problems of our political and social responsibilities... in my sixteenth year [he was born in 1902]... In 1938 [a year after he migrated to New Zealand], when I heard the news that Hitler had invaded Austria, my homeland, I decided to write down some of my thoughts about political freedom. (p. 355)

Certainly, social issues became the focal point of Popper’s lifelong concerns. Psychology of the brain was Popper’s formative field, which drew primarily on physics and biology, and left its indelible mark on Popper’s understanding of social science methodology. In effect, though not always acknowledged, Popper’s concepts are to be taken “as means to broad social and political ends, and not as ends in themselves” (Sassower, 2006, p. 40). In light of the dire conditions endured in Austria and beyond, open society has become Popper’s overarching thesis. A closed society is characterized by abstract, repressive, un-contextualized, and disconnected truths, all of which lead to passivity, stagnation, misery, and monotony. An open society cherishes creativity and participation of all individuals.

The concept of an open society was not invented by Popper. Popper (1971a, p. 202) acknowledged that he borrowed the phrase from the French philosopher Henri Bergson (1859-1941). In a later statement, Popper argued that the German poet Heinrich Heine (1797-1856) used the concept open and closed society before Bergson: “Much later I found that, long before Bergson, the German poet and historian of ideas, Heinrich Heine, had also used it [open/closed society]: he described (approximately in 1850) Prussian society as closed society, and French society as open” (Popper, 2008, pp. 388-389). However, no firm evidence has been found to prove this claim (Popper, 2008, p. 478, footnote 6, see also Heine, 1840/2006). Remember that a large part of Heine’s works were burned at Opernplatz (Berlin) in 1933 by the Nazis (see *Micha Ullman*, s.d.). Heine’s words referring to the burning of books and people had been engraved at the Opernplatz (Bebelplatz) site and can be seen to this day.

⁴ For specialized research, Gorton’s (2006), Keuth’s (2005), and Rowbottom’s (2011) works, among others reference helpful sources regarding Popper’s philosophical debates.

An open society is not fixed in a specific social system, but is an ongoing journey along the lines of which we critically review our actions, theories, ideas, and structures in the hopes of enjoying fuller lives. Open society lends itself to a broader scheme of open science and open universe (Popper, 1988). In an open universe, humans can dream the highest, reach the broadest, and feel the deepest while a closed universe confines and crushes minds and hearts. The concept of open universe includes more than open dimensional space. It includes the conceptual, creative, and critical spaces for human thought and action. In addition, open universe folds in the laws of nature as the forces that fulfill and advance all individuals and their properties. For example, the more openness roses enjoy the more they radiate fragrance, but when roses endure closedness, the less they thrive. Similarly, better human lives require open space/universe for our bodies, feelings, ideas, and societies. Open universe loosens the shackles of social systems under which we struggle to survive despite financial and emotional pressures. Unrestricted freedoms and unrestrictive theories mark the difference between open science and closed science (science and non-science), open and closed world, open and closed universe, and open and closed society.

This value of openness fueled Popper's critique of historicism. Historicism teaches that a few people have "the supreme task of the great men and great nations to become actors on the stage of history" (Popper, 2008, p. 133), and it is a natural law that a given race is considered to be the chosen people and the required instrument of evolution and human destiny (Popper, 1971a). Under historicism, the rest of humanity is called to emulate the biological and human superiority of the chosen people. He also spoke of spiritual historicism in the sense that a given race is considered to be the people chosen by God and the instrument of God's will. Against this belief, Popper argued that no one group of people and race can totalize and supplant humanity and its complexity. This shows how the idea of the chosen people can also be applied to racism. One of the most forgotten tenets of Popper is his characterization of racism. Popper included racism under the umbrella of historicism (see Popper, 1971a, pp. 9-10). Methodological individualism comes in sharp contrast with racism and historicism since both impair the open society.

While it is not uncommon to defend society with the belief that a group of people are chosen whereas others are not, the belief of the chosen people is brought to greater light when humans are faced with various kinds of challenges and predicaments. At another level, Popper described historicism with the idea of economic development wherein the chosen people are presented to be the instrument of economic progress, and whose stages of development other societies ought to emulate. These days of endemic economic crisis that reel across the globe offer a perfect opportunity to witness examples of the chosen people concept. Imagine someone has been laid-off from work. The system of the chosen people is so engrained in our heads that we tend to rationalize someone's job loss by saying that the person might not be meant (chosen) for that job in that particular company. The person is thus advised to seek work elsewhere, if she can. Rarely do we argue that those who had remained in the company are not as well made to be there, or that they have to look for work someplace else. It all appears that, for better or worse, the departure of the laid-off person and the staying of the others in the company ensures a normal and stable society. With the idea of the chosen people, society becomes closed, and the ability to build, revise, and improve basic services, systems, and individuals' actions fades. An open society, however, achieves the unrestricted manifestation and fulfillment of individuals' lives and their worlds. Open society seeks to "fight against avoidable concrete evils such as avoidable

misery" (Popper, 2008, p. 118). It does not mean that one cannot lay off a person in a reasonable manner, but that an open society endows all individuals with fuller life. All are chosen and entitled to live to the full.

As one can see, the open society calls for a full review of our thinking in order to bring about a better world for each and every human. Consequently, situational analysis's role is to criticize, affirm, and illuminate the actions, relations, values, properties, and potentials of each and every individual. An open society implies an open universe, a universe which is indeterminate in order to allow unrestrained and fuller fulfillment of individuals. This also implies an unrestrictive science which is always open and incomplete. As Popper (1996a) put it so well, "I regard freedom, political freedom as well as a free and open mind, as one of the greatest, if not *the* [emphasis in original] greatest, value that our life can offer us" (p. ix). The open society is a way of life, from thinking to acting to feeling to being. As mentioned above, science is not exempt from the open society.

Popper's extensive comparison of the open society with Western societies can lead people to believe that the open society must be found in Western societies. Popper (2008) wrote,

Western societies are the freest, the most tolerant, the fairest, and the least violent societies of which we know: with the exception perhaps of pre-twentieth-century Eskimo society. In this there were some cases of murder or manslaughter, but no other forms of violence, as far as we know. These Eskimos lived almost without government... The truth is that... they [Western societies] are the only societies in which there is much freedom; in which much is done for the welfare of the needy; in which there is much equality before the law, and in which there is much toleration. (p. 317)

While such a statement implies that the open society is exemplified in Western societies, there are a number of nuances to consider, from which I have selected the three most important. The first nuance is that Popper recognized the Eskimos as an exception/corrective to his understanding of society without violence. Meanwhile considerable anthropological materials show numerous non-Western societies (Lévi-Strauss, 1948; Malinowski, 1922/1984; Murdock, 1959) that had lived for centuries without major violence, repression, genocide, etc. Among others, the sense of cohesion and community is predominant in several non-Western societies.⁵ To illustrate, democracy is widely considered to be one of the most obvious signs of a fair society. While it has been formalized in the past few centuries in the West, democracy is not a specialized Western product. Sen (2009) wrote, "there were, in fact, several experiments in local democracy in ancient India... We have to look beyond thinking of democracy only in terms of European and American evolution" (p. 322). The signs of a fair society, such as democracy, justice, equality, and the like are deeply engrained in the hearts and minds of all humans. It doesn't mean that all societies of the world are fair, but that ideas of democracy, justice, equality, etc. are not alien to human nature nor are they reserved to a specific class/nation. This is why even within the most vicious regimes one finds voices of opposition. Sen (2009) went on, "the practice of elections, in fact, has had a considerable history in non-Western societies" (p. 330). Yearning for a better world, all societies can align perfectly with the concept of an open society. The second nuance after Popper's recognition of Eskimos is that critical

⁵For further discussion about community tendency in Western societies see Putnam (2000).

discussion was prominent in several non-Western societies. For example, in the event of repeated/proven improprieties, a king could easily be deposed by a group of sages in the Luba empire in Africa (Reefe, 1981). Another example, among many, can be found in ancient India (Mookerji, 1919, Sen, 2005). Discussions about the substantial issues of daily life have preoccupied humans across cultures and times. The third and last nuance relates to Popper's (2008) clarification that "of course, our society [Western] is very far from perfect" (p. 317). As it should be clear now, the open society is a journey in which Western societies are also partaking like any other society.

Popper recognized that an open society is not fixed in a particular system, but he also emphasized that there is much work that needs to be done in Western societies. The fact that work needs to be done in Western societies underlines humanity's deep-seeded search for freedom. This search is far from finished in any human society. Humans are engaged in a movement towards improvement and a better world.

Although I look upon our Western welfare state with critical eyes, I assert that we in the West have achieved a greater degree of freedom and justice than any other civilization of which we have knowledge; even though *there is still too much oppression and injustice* about, and even though the great hope has not been fulfilled that by combating poverty and tyranny we shall be able also to eliminate or at least reduce unhappiness, alcoholism, drug-taking, and crime. Thus although I regard our society as *greatly in need of improvement and reform*, I assert that we have achieved much, in spite of the many grave mistakes we have made. *The evolution of our society towards a freer and more open society is not the result of impersonal historical laws.* It is, I suggest, the result of a *movement for freedom...* This movement has its basis in a longing for freedom, and in a generous impulse of uncounted and unknown men to better the lot of their fellow men, to produce a better world. [emphasis mine] (Popper, 2008, p. 301)

An open society proves to be a vision in the direction (Western) societies are called to journey in order to improve people's destiny and make the world a better place. Western civilization is not, in and by itself, the end goal of the open society; rather the open society seeks to bring about a better world and create fuller life.

The open society does not come by the mere multiplication of nice and good-hearted individuals talented with bright dreams, but it comes by the hard work of criticizing what has been done and what ought to be done in the interest of all. "What is needed, what must be added to our dreams of a good society is, more than anything else, hard critical thinking... Hard critical thinking is painful and unpopular" (Popper, 2008, p. 289). Policies and decisions ought to be the subject of ongoing criticism in order to implement an open society. Without critical discussion, the offered basic freedoms and other social advantages become unproductive and repressive. The open society is not a gift or check generously awarded by powerfully philanthropic and/or political figure(s), but it is a way of life secured by critical thinking. Safety does not come from weapons, but from critical thinking.

Popper outlined the three principles of critical thinking as follows (Popper, 2008, p. 323):

1. I may be wrong and you may be right
2. Let us talk things over rationally
3. We may get nearer to the truth, even though we do not reach agreement

The first principle is based on the fact that humans are prone to error, even with the best intentions. The second principle highlights the idea that errors can be corrected and appreciated through critical discussion. Error doesn't necessarily mean lack of knowledge. An error can lead to a discovery and/or stronger understanding of that which is being studied. The third principle concerns the idea of journeying, not arriving, towards the truth. Arriving means there is no longer any horizon or vision to head to and long for. We can arrive at a specific location or goal, but we will always need horizons in order to see better and farther. Popper used the concept of biological adaptability to illustrate the open society and its core methodology, critical thinking. Biological adaptability allows individuals to face and survive fluctuating environments. Inflexibility, or the lack of adaptability of a society, leads to the necessity of extermination. With critical thinking, people learn from mistakes and challenges to forge newer and more efficient paths in their journey towards a better world. The search for and discovery of newer paths make critical thinking the cornerstone of science.

5. Popper and science

What distinguishes science from non-science is not experiment or predictability, but theory. One could undertake a work that changes the whole world, but without theory the work is mere activism, philanthropy, prediction, or exposition. Popper (1996b) insisted, "in the sciences [social and natural], *we work with theories* [emphasis mine], that is to say, with deductive systems" (p. 75). For the characteristics of a theory see my other book chapter (Cibangu, in press). Deductive systems involve the reflections devoted to the logical consequences of the researcher's statements. Theories are looked at through critical discussion. The goal of science is not to proclaim the universal truths observed and collected from induction, but to be open to the criticism of obtained statements. Critical discussion is based on deductive logic to free the particulars and individualities from the extermination of the whole. In the Popperian sense, the ability to criticize and/or craft a theory is the fundamental method that differentiates science from non-science. This method is also called the trial and error theory or searchlight theory (ter Hark, 2003, 2004a, 2004b, 2006, 2009) of knowledge acquisition. Searchlight theory has the nuance of theory as search of light, and not as a fixed container of truth. We acquire knowledge through the process of trial and error. Though we have natural dispositions to it, knowledge is not something innate, but is discovered through applying a set of theories and constructs to a particular context. Popper first mentioned the trial and error method in his dissertation, explaining that "the method of science is one of tentative attempts (or brain-waves) to solve our problems which are controlled by the most severe criticism. It is a critical development of the method of 'trial and error'" (Popper, 1996b, p. 67). The trial and error method allows for falsification.

According to Popper, the distinct feature of scientific knowledge does not reside in the objective laws of nature and society, nor in the ability to verify and replicate the findings and suggested theories, but in the criticism of proposed theories and related concepts. Falsifiability comes through critical discussion, a method in which particular situations are examined on the basis of trial and error. As Keuth (2005) noted, "*every universal statement is falsifiable* [emphasis in original]" (p. 31) since there are no monolithic, universal truths. Scientific statements are and should be falsifiable under specific conditions and circumstances. When a statement's, proposition's, or an idea's falsifiability is acknowledged,

this does not necessarily mean that these statements are useless. Nevertheless, scientists and policy-makers should be aware that the falsifiability of their claims (or some portion of their claims) is probable, instead of simply enjoying the ethos gained by the unchallenged use and occasional imposition of their claims. To be aware of the certainty of falsifiability requires an expectation that critical discussion will aim to *falsify*, or more precisely, to bring into greater focus the prone-to-error dimensions of obtained statements, decisions, or policies. Falsifiability, not predictability as is often suggested, represents the status of proposed theories, which in turn call for critical discussion in order to yield the most likely answer to problems posed.

Without critical discussion, the Popperian falsifiability or falsification loses its purpose. While falsifiability has been widely known as the marker of Popper's work, it has obscured Popper's epistemological teachings, the most dominant theme of which is the trial and error method of knowledge. It is questionable that most discussions about the social sciences do not address the concept of falsifiability, and simply leave it to philosophers of science. As a result, the broader setting upon which falsifiability is anchored often escapes authors' attention. In sum, important ideas used by Popper (1959, 1972) to explain falsifiability are trial and error theory of knowledge, natural selection, and survival of the fittest theory. Crafted in his dissertation, trial and error theory characterizes Popper's methodology. Trial and error method allows a proposed theory to survive the process of natural selection and become the fittest theory. With trial and error being the key criterion of scientific knowledge, one cannot verify, but only falsify theories. Trial and error method ensures the objectivity of scientific work. Popper wrote,

The so-called objectivity of science lies in the objectivity of the critical method; that is, above all, in the fact that no theory is exempt from criticism, and further, in the fact that the logical instrument of criticism – the logical contradiction – is objective. (1996b, p. 67)

Critical discussion comes into existence through inter-subjective exchanges. Critical discussion bridges the space between individuals and thus beyond subjectivity to reach the most truth-like knowledge. As stated earlier, no theory or ensuing institutions should outstrip the centrality and urgency of criticism. Falsifiability concerns all theories involved in the research process.

The question becomes whether one can or cannot criticize ones' philosophical underpinnings, namely: traditions, beliefs, worldviews, convictions, values, goals, standards, and decisions that sustain research. Popper argued that since philosophical underpinnings can prove to have a deep-seated, and often unnoticed, impact upon research and society, they need criticism all the more. He noted, "we also hold theories which we take for granted more or less unconsciously and therefore uncritically; and these uncritically held theories often contain the strongest reason for continuing to hold to other theories consciously" (1983, p. 14). These are all philosophical underpinnings from which we develop and defend other theories concerning reality and the world in which we live. Taken-for-granted theories, so to speak, rule our conscious endeavors. It is worth pointing out that the Popperian critical discussion is not synonymous with agnosticism, a philosophical current that excludes all knowledge. To be clear, Popper did not claim that a truth and a theory cannot and should not be tested, accepted, and maintained as such. Rather he advocated for an open science that always assesses our vulnerabilities and

attempts newer solutions. Popper did not propound a falsificationistic agnosticism, nor did he propound falsificationism that rejects all truths for the sake of falsifying. Using trial and error theory, he proposed falsifiability for the sake of open society.

Tested theories and/or statements can govern our values and priorities under given circumstances and at a given point in time. "There must be *some* [emphasis in original] kind of minimum philosophy common to, at least, a great majority of those living in an Open Society – a minimum common denominator, leaving room for the mutual toleration of otherwise most diverse philosophies and views" (Popper, 2008, p. 137). Open society does not mean a society void of minimum goals, values, and priorities with which to go about our daily lives. The question remains as to how far toleration should go. This remark takes us to the realization that falsifiability is only a portion of Popper's broader social program.

With trial and error method, theories and human products are not holders of truth, but pointers of light in our endless search for greater light. The vulnerability of our theories is inter-subjectively assessed through the platform of critical discussion. Popper came to the thesis of falsifiability on the basis of the following grounds:

The theory is criticised from very many standpoints in order to bring out those points which may be *vulnerable*. And the testing of the theory proceeds by its *vulnerable sides* to as severe an examination as possible. This again is the trial and error method. Theories are put forward tentatively and tried out... Its success depends mainly on three conditions, namely, that sufficiently many and sufficiently different theories are offered, and that sufficiently severe tests are made. In this way, we may secure, if we are lucky, the survival of the fittest theory by a process of elimination [emphasis mine]. (1940, p. 404)⁶

Popper considered criticism to be a responsible process whereby a person's selected theories, propositions, hypotheses, and constructs are called in question for a better grasp of reality and more productive inquiry. Criticism is directed against a theory's vulnerability. To be precise, in Popper's perspective, one does not hold one's beliefs because they are true and absolute, but because they are true-like and vulnerable. Appraisal of the fittest theory does not eradicate vulnerability. Though it is usually taken as negative, vulnerability conveys the obligations, responsibilities, and challenges that a given theory brings with it. Remember that a closed society does not accept or acknowledge its vulnerable areas. Only in an open society, as discussed earlier, can we capture the points of vulnerability. The temptation, and in fact a disservice to Popper's legacy, is to strive for criticism-proof societies and forget our vulnerabilities and the ability to sort them out. Popper asked us to consider that

Scientific knowledge, and the human rationality that produces it, are, I believe, always fallible, or subject to error... Science and rationality have really very little to do with specialization and the appeal to expert authority... And it is the freedom from intellectual fashions and specializations that make science and rationality possible. (1996a, p. ix)

⁶ This passage can also be found under a slightly different version of the paper published in *Conjectures and Refutations* (Popper, 1989, p. 313).

Taken this way, criticism engages with the structures, authorities, and ideas that impede our basic freedoms. A pertinent example is that of accountability, wherein all individuals are answerable for their actions, choices, and values. “Bacon and Descartes set up observation and reason as new authorities, and they set them up within each individual man” (Popper, 1989, p. 17). Fallibilism reminds us that we need to always be aware of how our vulnerability can impact our reason, experience, and observation, and how it has the potential to undermine basic freedoms.

Fallibilism is a significant element ... of the philosophical *zeitgeist*... It is worth reminding ourselves that Popper and the critical rationalist movement... were responsible for emphasising the limitations of science, and [of] our inquiry more generally... Even our simplest and most successful theories and our most elementary observation statements may be wrong. (Rowbottom, 2011, p. 147)

Despite science’s technology-facilitated advances, the claims of scientists carry and induce definite errors. “The insight that all knowledge is fallible constitutes Popper’s most formidable contribution to the understanding of science” (Stokes, 1998, p. 43). Though they are among the most commonly touted features of science, rigor, predictability, and experiment cannot override the fact that science, the methods used, the findings obtained, the conclusions reached, and the researchers involved are fallible. It is therefore unrealistic to ignore the inexorably fallible nature of scientific work and its various tools. In much the same way, Popper asserted that we are all vulnerable to falsifiability.⁷ One tends to forget this aspect of vulnerability that Popper clearly mentioned.

Perhaps a term that can help us understand Popper’s conception of theories is nets. Popper (1988) wrote, “I see our scientific theories as human inventions – nets designed by us to catch the world” (p. 42). A net is essentially a pliable and removable tool that serves not to kill and destroy, but to allow the flow of water, liquid, air, and the like. The idea implies that a net is not a razor-wired wall with which to hurt and stop humans, but a set of threads through which humans gather ideas to catch and select a specific item for a specific goal. Like nets, theories are removable and pliable. The back-and-forth flow of water (ideas) and the pliability of nets speak to the open universe for which Popper fought. Only through theories as nets, not walls, can the areas of vulnerability be sorted out and brought to light for better actions. What we gain with the metaphor of theory as nets is that theories have holes through which we can take a peek at the future. In this sense, obtained theory does not blind, but enlightens the mind. In other words, the more holes we have in a theory, the more outlets we have to move forward in our journey. Critical discussion seeks to obtain—not absolute containers of truth, but the most vulnerable theories. Popper warned against the myth of agreement when it comes to critical discussion. He maintained that whether agreement is or is not reached, critical discussion brings us closer to the truth. The goal is not to reach agreement or obtain the truth, but to critically examine our undertakings in the hopes of assessing our areas of vulnerability and continuing our journey towards truth. With the metaphor of nets and their holes, theories are pointers to search out truth, but they are not truth in themselves.

⁷ For further information about falsifiability and fallibilism see Keuth (2005, pp. 31-50), Rosende (2009, pp. 135-154), and Stokes (1998, pp. 25-45), among others.

Popper's biography lays the foundation of his writings. The Nazi domination of societal structures and the ensuing extermination of individuals' lives stand in stark contrast to Popper's overarching theme of open society, science, and universe wherein individuals can criticize social structures, human undertakings, organizations, and suggested theories. Popper did not reject fundamental truths such as basic concepts, goals, values, priorities, and objective realities of ordinary life, but these truths are not by nature immune from critical discussion. Critical discussion does not mean total rejection of tested and accepted knowledge. Instead, it is important to foster an open universe wherein inter-subjective criticism raises newer questions and pinpoints both the fittest and the least vulnerable theories and solutions. Open society has the potential to raise newer questions and try newer solutions. Popper understood open society as an ongoing journey.

6. Practical considerations

Let us consider contemporary global problems to see how the idea of open society has played out in our times. How far, for example, can we say our society is open?⁸ Popper listed five contemporary issues that impair the advent of an open society at the global level, namely: (1) world peace (against nuclear weapons), (2) population explosion, (3) bureaucracy, (4) children's education (against media propaganda of sex and violence), and (5) crime. It is impossible to provide a comprehensive list of the challenges, by nation, community, neighborhood, family, and individual, that threaten the open society. It is equally impossible to address these and many other challenges without an open society wherein theories are given as nets that provide further outlets, and not as walls that bar human creativity. Recently, several areas of vulnerabilities have come to the forefront: economic interdependence of our world, dozens of pacific Islands in danger of submersion, increasing weather-induced disasters, relentless incurable diseases, and global poverty. Critical discussion lends itself to be the forum of concerted efforts to make the world a better place. In my view, Popper neglected to give much of his attention to several key issues, including, but not limited to, women, animals, minorities, the environment, indigenous cultures, and the disabled.

7. Conclusion

While extensive literature has raised awareness about Popper's idea of falsifiability, it has given little to no attention Popper's social doctrine. Consequently, Popper's legacy figures among one of the most misunderstood topics of our times. To add to this lacuna, a great deal of Popper's material remains unpublished. His thinking is remarkably social, seeking to defend and improve people's lives in an open society, an open world, and an open universe, through an open science. The idea of chosen people is so engrained in our minds that we tend to see a few people as actors on the stage of history and others as recipients and emulators. Open society represents the core tenet of Popper's writings. Against the widespread belief that the social sciences represent a weak form of science, Popper supplied us with a strong sense of the social sciences as being fully scientific, objective, and empirical. It is erroneous to think that the laws of physics do not apply to the emotional and social

⁸ See Popper's (2008, pp. 391-393) latest reflections on the open society.

worlds. Popper attempted to show that science is not solely experiment or rigor, but rather, science generates theory and makes beneficial contribution(s) to the world. Popper suggested a richer understanding of scientific objectivity, which he located in inter-subjective critical dialogue. To that end, Popper defended the trial and error theory, searchlight theory, and theory as nets, all of which remain scant in published analyses of Popper's work. Popper was not an agnostic social thinker, advocating falsifiability for the sake of it, and rejecting all form of knowledge. Rather, he advocated the submission of scientific knowledge to critical discussion as part of ensuring an open society. Productive criticism depends upon an open society in which we can freely assess the vulnerabilities and mistakes embedded in our theories to propose newer solutions for fuller human lives. Popper did not prescribe universal recipes for improving human lives; instead, he proposed an open society in which individuals' lives can be fully actualized. Thus, the details of creating and maintaining an open society are left open for further research. These and similar issues cannot be addressed within extant limited engagement of Popper's work. This chapter has shown some of the most important, and, yet, often forgotten themes of Popper's social thoughts.

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Historicism, Hermeneutics, Second Order Observation: Luhmann Observed by a Historian

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1. Introduction

An element shared by sociology and history, and to a certain extent by social or cultural anthropology as well, is their claim to study society as a whole. Whereas economy, law, political science, religious studies or linguistics concentrate on a single aspect of society, the aforementioned disciplines aspire to integrate all aspects into a comprehensive and coherent picture. This requires, first, specialist knowledge about the several subsystems of society, which is provided by a great number of subdisciplines, and, second, a theory synthesizing all this knowledge and explaining how these subsystems hang together. The second requirement is hard to satisfy because of the great complexity of the task.

First, there is the complexity of the network of relations between the subsystems of society. Social theorists, particularly modernization theorists often oversimplified this reality by reducing the development of society to a single system, most often the economy. A classic case is the economic determinism of Marxism. A more recent example is Neoliberalism with its claim that everything starts with the free market, including political democracy. It is undoubtedly true that democracy prospers in a free and thriving society, but utterly misleading to suggest that politics depends on the economy in a linear-causal way. One might just as well argue that there would be no free market without a state prohibiting monopolies and safeguarding legal security and other public services. These opposing views show that we should not think in terms of linear but of circular relations. Politics and economy condition each other, and so do all other subsystems of society, which adds up to an overwhelming complexity.

Second, macro theories must take into account another circularity, namely between subject and object. Each attempt to describe a social whole of which one is oneself a part entails an element of subjectivity or self-referentiality, which is a serious problem from the perspective of traditional epistemology. For historians the problem becomes serious when they start thinking about contextualism. It seems perfectly all right to place a text or event in its historical context, but the question is how to define context. It seems that we can circumscribe a context only from the perspective of a wider context, but then we will have to look for the context of this wider context, and so on. This infinite regress will go on until we reach the ultimate context of world history or universal history, which can be defined only

from a transcendent level. Without a God's eye view, we can only resign in the conclusion that there is no final closure and no way to escape self-reference (Priest, 1995, 123-195).¹ Among sociologists Karl Mannheim, who based his sociology of knowledge on historicism, proved most sensitive to the problem of self-referentiality or "reflexivity" (Laube, 2004).² Not coincidentally, the sociology of knowledge became the springboard of social constructivism later on (Berger & Luckmann, 1966).

The social theory of Niklas Luhmann stands out as the most successful attempt to deal with the problem of complexity. It gives a clear definition of modern society in terms of functional subsystems while taking self-referentiality explicitly into account. From a historian's perspective, it has the additional advantage of solving two central problems of historicism, respectively historical individuality and the historical method. The problem of individuality refers to the historicist focus on uniqueness as opposed to the scientist focus on general rules, also known as the ideographic-nomothetic distinction of Windelband. It has not so much to do with personal individuality as with the individuality of social wholes, which is a controversial issue. The problem with the historical method, on the other hand, is that history does not qualify as a normal, empirical science in the sense that it directly observes its own object of study. Historians usually work with relics from the past, mostly with texts. So, one might say, that they are second order observers, who observe how people from the past observed their own world. This creates peculiar problems, to which methodologists have been blind most of the time.

It is the aim of this chapter to explain that Luhmann offers a solution to the two problems of historicism. First, systems theory can function as a bridge between the ideographic and nomothetic perspective. In this context Luhmann's concept of the autopoietic system is especially useful. Although it obeys the rules of general systems theory, it fulfils the same role as the historicist notion of individual, organic wholes. Second, in connection with the concept of autopoietic systems Luhmann developed an epistemological theory of "second order observation", which explains what history and the humanities always practiced but were never able to put in words adequately. Before discussing these two topics, I will give a short introduction on Luhmann's position with respect to historicism.

2. Historicism and Luhmann

Although Luhmann did not consider himself an exponent of historicism, it is possible to interpret him that way with the help of the related concept of functionalism, which plays a central role in his work (Hollander, 2010). Luhmann himself recognizes the close connection between the two concepts when writing, "Historicism and functionalism originated simultaneously and are closely connected" and, next, "The problems occasioned by theoretical reflection on the historicism and functionalism of social discourse are still

¹ Priest sees the "inclosure schema" implied by Russell's paradox as the basic structure of all paradoxes of self-reference. Briefly stated the problem is as follows. If the application of an operation to a totality of some kind produces a novel entity of that kind, in our case a new context, the application of the same operation to the totality of all entities of that kind will produce something that is both inside and outside that totality.

² An interesting detail is that Laube (61-68) discusses Luhmann's thought as a continuation of Mannheim's historicism.

unsolved after 200 years" (Luhmann, 1993, 9-10). The common background of functionalism and historicism was the intellectual revolution that took place between 1750 and 1850 and that was described by Mannheim as the transformation of a "static" into a "dynamic" worldview (Mannheim, 1952). Historians usually speak about "the rise of historicism", as Friedrich Meinecke's classic work of the same name shows (Cassirer, 1923). Luhmann spoke about functionalism, because he was inspired as a young man by Ernst Cassirer's *Substance and Function* (1910) dealing with the same subject matter, though from a more specifically philosophical point of view. Cassirer's thesis was that the traditional, Aristotelian philosophy of substances and essences gave way to modern thinking in terms of functions and relations. His work had a great influence on system thinkers like Talcott Parsons and Luhmann (Horster, 2005, 26; Rill, 1995; Jensen, 1980, 29).

In the second half of the eighteenth century, change became the key concept to understand social reality. It was not a new concept, of course, but it was used in a new, less restricted way. In pre-modern thought, change was restricted in the sense that it was supposed not to affect the "substance" of a thing, only its "accidental" properties. Even today, this idea still has some plausibility, because common sense tells us that there must always be *something* that changes and that must therefore be unchangeable itself. The Aristotelian-Thomist tradition applied the substantialist view of change not only to individuals but also to the species "man", which was, technically speaking, a "second substance" inhering in "first substances" such as Socrates or Cicero. The implication was that human creatures have essential properties that should be unchangeable over time. This was the basis of the natural law theory, which postulated rules of conduct valid at all times and all places. Understandably, this body of thought left little room for history.

Before the eighteenth century the role of history was modelled on the saying *historia magistra vitae*, viz. history is the preceptor of life (Koselleck, 1985). The idea was that history should teach "morality by example". For instance, by reading Cicero a young nobleman expected to learn how to deal with public affairs. From the fifteenth century, onwards hermeneutic interpreters of the Bible and of the Roman Law Corpus however spread the idea that temporal and cultural distance might be an obstacle for understanding the past, but this idea only gained currency with early historicist thinkers like Vico and Herder. An important factor was the criticism of natural law philosophy by David Hume and others. This cleared the way for new ideas of historical change and evolution. Johan Gottfried Herder, for example, began to experiment with the idea of non-substantialist change, suggesting that the substance itself might be a subject of change. A typical Herderian quote is "I am what I have become" (Meinecke, 1965, 377). It articulates the idea that our essence or identity lies in our own past and that "being" must be derived from "becoming". Herder based this idea on Leibniz, who had conceived of substances as individual "monads" with an inherent force of change. Interestingly enough, Leibniz is also the principal person in Cassirer's book, where he is responsible for modern thinking in terms of functional relations.

According to Ankersmit, it is possible to distinguish four meanings of historicism (Ankersmit, 2010). The first and most important meaning is the idea that the essence or identity of a thing is to be found in its past, in its own development. Derived from this is the second meaning, according to which a thing differs at each phase of its development substantially from what it was before, which is an argument in favour of historical uniqueness. Together, these two connotations define the non-substantialist view of change

mentioned above. From this new ontological premise, historians inferred a third, more methodological meaning defined by Maurice Mandelbaum as “the belief that an adequate understanding of the nature of any phenomenon and an adequate assessment of its value are to be gained through considering it in terms of the place it occupied and the role it played within a process of development” (Mandelbaum, 1971, 42). This implies among other things that historians should not approach their subject in an anachronistic way, by looking at it solely through the lens of their own time. The fourth meaning, put forward by Karl Popper, stands somewhat apart from the rest. It refers to “The belief... that it is the task of the social sciences to lay bare the law of evolution of society in order to foretell its future” (Popper, 2002). Most historians will subscribe to Popper’s criticism of this version of historicism, because of their deep-rooted belief in historical contingency. Therefore, this definition of historicism clearly stands apart from the three previous ones.

Historicism was not entirely successful in driving out the traditional ontology of substances and essences, because common sense keeps telling us that change is attributable only to something remaining the same through time. However, it undeniably made western thought more receptive to the idea of historical change. An important discovery, already made by the philosophers of the Scottish Enlightenment, was the “law of unintended consequences”. The Scottish philosophers realized the insufficiency of the individual action perspective characteristic of the Aristotelian tradition of practical or moral philosophy. This perspective could not explain all phenomena in socio-historical reality as Adam Ferguson so eloquently put it in 1767: “Every step and every movement of the multitude, even in what are termed enlightened ages, are made with equal blindness to the future; and nations stumble upon establishments, which are indeed the result of human action, but not the execution of any human design.” (Ferguson, 1995)

The discovery of “the law of unintended consequences” was important to history as well as the social sciences, because it showed that we have to reckon with “invisible” or latent structures developing as it were behind people’s back. It did not completely rule out the individual agent’s perspective, of course, as historical narratives in particular show. An important aspect of the modern narrative is historical irony, which is rooted in the tension between the viewpoint of the narrator and that of his characters. In fictional as well as in nonfictional narratives the authorial, omniscient narrator knows more than his characters. He knows their future and the unintended consequences of their actions. This may give an ironic twist to the description of the agent’s actions, because it shows that people are often doing other things than they think they are doing. At the same time, it opens the possibility to show an unconscious development, the growth of a character or of an institution. Novelists as well as historians exploited this scheme. Summarizing we can say that the narrator’s viewpoint is structural and anachronistic and that it has a counterweight in the historical agent’s viewpoint with which the reader is supposed to identify him- or herself.

A difficult epistemological question is, whether the latent structures and processes mentioned in nonfictional narratives are “made” or “found”. For example, are “nations”, “cultures”, or “epochs” parts of socio-historical reality or narrative constructions? Early historicists like Leopold von Ranke and Wilhelm von Humboldt were ambiguous about the status of what they often called “organic wholes”. They tried to solve this problem with the notion of the “historical idea”, which is a kind of temporalized Platonic idea, referring not to the timeless forms Plato had in mind but to historical, time-bound forms like *Zeitgeist* and

Volksgeist, or, to give some more recent examples, ideology, mentality, paradigm, discourse or episteme. These ideational wholes may be “invisible” but the historicists considered them nonetheless as real, discrete entities, in the same way as mathematicians often do in the case of numbers. Historical ideas were said to possess, moreover, a motivating force or organizing principle (*entelechy*), which makes them into a kind of individual, historical monads. This historical idealism appealed to historians, but the public was not convinced, which was another reason why the idea of non-substantialist change was not widely accepted. In the course of the twentieth century, even historians seemed to turn their back on historicism.

In the 1960s and 1970s, many academic historians advocated a merger of their department with social science departments like sociology, political science and anthropology. We can think for instance of the *Annales* group in France and the German movement “beyond historicism” (Mommsen, 1971). Young leftist historians in Germany criticized the nationalistic historiography of the older generation and even went so far as to accuse historicism of having paved the way for National Socialism. Their rallying point was the so-called Bielefeld School led by Hans-Ulrich Wehler and Jürgen Kocka, who were promoters of a “historical social science”. The irony of the situation was that their Bielefeld colleague Niklas Luhmann at the same time criticized his fellow-sociologists for their a-historical or even anti-historical attitude. A telling detail is that Luhmann started his academic career in 1967 with an inaugural lecture on “Sociological Enlightenment”, in which he advocated a more critical attitude towards the Enlightenment. He characterized this attitude with the pun *Abklärung der Aufklärung* (purification of the Enlightenment) (Luhmann, 2005).

Luhmann’s programmatic statement cannot but remind historians of the Romantic period, the founding era of their own scholarship, which started the criticism of the Enlightenment. Contrary to what many people believe, however, Romanticism was not simply a “Counter-Enlightenment”, at least not as far as history was concerned (Berlin, 1997). Historians like Ranke did not disapprove of the enlightened campaign against prejudices, but declared, on the contrary, that it did not go far enough. In their view the *philosophes* had failed to meet their own standard by overlooking a major prejudice, namely the bias of their own time. Voltaire, for example, had viewed the past only through the lens of the present, and it was this presentist or hodiecentric state of mind that Ranke denounced in his often-quoted statement “To history has been assigned the office of judging the past, of instructing the present for the benefit of future ages. To such high offices this work does not aspire: It wants only to show what actually happened (*wie es eigentlich gewesen*).” (Ranke, 1973). In short, by unmasking the biased character of the rationalist approach of the past the romantic historicists radicalized the Enlightenment programme. That is why Mannheim wrote in his study on romantic-conservative thought, “Romanticism achieved a rationalization which the bourgeois Enlightenment could never have carried through” and why Hans-Georg Gadamer sharing the same opinion in *Truth and Method* wrote “the historical consciousness that emerges in romanticism involves a radicalization of the Enlightenment” (Mannheim, 1993; Gadamer, 2004, 277).

Likewise, Luhmann believed that an enlightened sociology should avoid the “lazy rationalism” of the eighteenth century by paying more attention to the complexity of the world and the ensuing need to reduce this complexity. In his lecture, he mentions four promising approaches in sociology, which would not be out of place in history either. The

first approach invites us to see a text or event from a surprising and unlikely standpoint, a “perspective by incongruity”, as the literary theorist Kenneth Burke called it. This comes close to the metaphorical interpretation of historians, which is sometimes visible already on a purely linguistic level. For example, by characterizing the fifteenth century as the autumn of the Middle Ages the Dutch historian Johan Huizinga completely reversed the (metaphorical) image of the springtime of Modernity as introduced by Burckhardt (Huizinga, 1924). The second approach mentioned by Luhmann is to be found in Freud’s concept of latency, which found its way in sociology through Robert Merton’s notion of “latent functions” (Merton, 1957). According to Luhmann, the repression of important aspects of social reality is a way to cope with the problem of complexity. Sociologists have the important task to enlighten people about their “unconscious” motives, but they should do this only if they have a clear view on the function of the latency and if they are able to offer functional-equivalent alternatives. The third approach suggests the replacement of factor theories by system theories. By “factor theories” Luhmann understands the monocausal theories discussed already in the introduction, viz. those reducing modernity to the industrial revolution or the Enlightenment.

The fourth and last approach, which Luhmann discerns in sociology, is the functional method. This approach requires somewhat more attention, since functionalism was a continuous thread in Luhmann’s thought. The source was Cassirer’s book on Leibniz’s function concept that Luhmann read in his youth and to which he refers in his lecture when saying, “Stimulated by philosophy functionalism is on its way to dissolve all substances into functions and to compare everything with alternative possibilities” (Luhmann, 2005, 91). Luhmann’s interpretation of functionalism differs from the traditional organicist and teleological idea that parts have a function for the benefit of the whole. This idea lived on in the structural functionalist theory focusing on the function of social structures such as hierarchy, social roles or centre-periphery relations. Luhmann’s objection was that the structure concept was thus granted priority to the function concept, with the risk of passing over fundamental questions about the rationale of structures or about the *raison d’être* of an entire system. This was also, where Luhmann disagreed with Talcott Parsons though being quite close to him in other respects. When Luhmann described his own approach half in jest, half in earnest as “functional structuralism”, he indicated that it should be possible to discuss the function of structures in terms of “functional equivalents”, even without assuming an encompassing system (Luhmann, 2004). He felt free to compare widely diverging aspects of socio-historical reality and in this he resembled historians using metaphors with a maximal scope in order to compare with each other seemingly incongruent phenomena.

3. Autopoietic systems

A classic dispute in the social sciences is that between methodological individualists and methodological holists. While methodological individualists depart from the empiricist principle that social phenomena are fully explainable in terms of observable individual actions, methodological holists object that this will not bring us very far and, moreover, that individual actions are often understandable only in terms of “societal facts”, to use an expression of Mandelbaum (Mandelbaum, 1959). An example of a “societal fact” is getting money from an ATM machine. How to explain this to a Martian? The action of someone

withdrawing banknotes from the wall of a building makes sense only to an observer knowing what a bank is and how the money system works. In a complex world like ours, little room seems to be left for old-fashioned empiricists. However, there is also a moral side to the dispute, which explains why empiricist individualists still hold ground. Holism has the unpleasant reputation of subordinating the individual to the greater good of church, class or nation. The experience of totalitarian regimes in the twentieth century has made this aspect of organicist and historicist theories highly suspect.

Against this background, Luhmann's radical holism may seem dubious, but as a matter of fact it is immune against possible moral objections, because it breaks with the container concept of society that considers individuals as constituent elements of social wholes. Luhmann contends that social systems do not consist of human beings but of communications. Strictly speaking, individuals do not belong to the social system but to its environment. They can partake in organizations as occupiers of functional roles, but it would be an illusion to think that they are an integral part of a social whole, especially in modern society where the dominance of ascribed status has been broken. Luhmann makes a hard cut between social communication system and individual psychic systems. These two kinds of systems have a lot in common. They are both meaning systems, characterized by intentionality or "aboutness"; they are closely connected by language, and are arguably even co-evolutionary. However, a crucial difference is that they cannot perform each other's operations. Communication systems cannot think and consciousness systems cannot communicate, in the sense of acting outside their own operational domain. The distinction between both kinds of system is the linchpin of Luhmann's theory. Many people find it hard to accept, because it contradicts our humanistic understanding that society is composed of indivisible called "individuals".

The resistance against Luhmann's theory and to systems theory in general seems often motivated by the fear of a mechanist worldview. This fear is based on a static, thing-like idea of systems, which is, however, not characteristic of Luhmann's theory but rather of the traditional definition of system as a whole consisting of parts. This definition is not so much wrong as one-sided, because it leaves aside the question whether or not the parts are ready-made, which is an important criterion for differentiating between machines and living beings, as the Chilean neuroscientists Humberto Maturana and Francisco Varela explain with the help of their distinction between "allopoietic" and "autopoietic machines". Allopoietic machines are made by others from ready-made parts, while autopoietic machines (re)produce their own components, in the way living organisms do (Varela & Maturana & Uribe, 1974; Maturana & Varela, 1980). Admittedly, human beings are also "made" by others, but they become autopoietic as soon as the umbilical cord is cut and the organism starts its own cell production. Autopoietic systems are not only dynamic; they are also circular in the sense that part and whole constitute each other. Saying that an organism is composed of cells is only half-true, because the cells are in their turn products of the organism as a whole. It is not clear where to start, with the whole or with the parts. This implies that autopoietic systems are operationally closed. They are open as far as they exchange matter with the environment, but they are closed in the sense that they control their own processes, without direct causal influence from the outside. It is eventually possible to destruct an organism by an external force, but in all other cases, the system decides for itself how to deal with external influences or "irritations".

In analogy to the Maturana-Varela proposal Heinz von Foerster distinguishes between “trivial” and “non-trivial” or “historical” machines (Foerster, 2003). The difference is that trivial machines are dependent only on their input state, while non-trivial machines depend also on their internal state. Non-trivial machines are “historical”, because the relation between input and output depends on values of their internal state depending in their turn on the input. This makes them analytically indeterminable and therefore unpredictable. It would be interesting to compare this recent view of organisms with Leibniz’s view of monads. For example, the recursive character of internal processes described by Foerster reminds of the entelechy or inner force of monads, which Leibniz describes as the “appetition” or striving from one perception to another. There is no room to dwell on this point, but we may hypothesize that the concept of autopoietic or historical machines comes close to the monadic inspired “organic wholes” of the historicists, especially when we take into account Luhmann’s broadening of the autopoiesis concept.

It took some time before Luhmann had a clear system concept. Starting with Talcott Parsons’s notion of action system, which focuses on social roles rather than on individuals, he went on to experiment with the idea of meaning systems, which drew on Husserl’s philosophy of consciousness. According to Husserl, consciousness is characterized by intentionality or “aboutness”. It is a recursive whole in the sense that each intention falls apart into retention and protention. This means that an individual thought or experience only exists by its reference to a previous and a possible next thought or experience. In other words, consciousness is a closed network. This conclusion worried Husserl, because it seemed to have solipsistic consequences. How can the ego be sure of the existence of other similar egos outside itself? Luhmann commented that Husserl seemed unable to deduce an intersubjective sphere from his “monadic subject” and he concluded that society should be seen as an independent “meaning system”. Critics argue that he thus shifted the monadic problem from the level of individual consciousness to the level of social communication (Habermas, 1985; Knudsen 2006). This is a serious objection, but Luhmann rejected the implicit accusation of solipsism, as we shall see below.

About 1980 Luhmann started to rebuild his theory around the concept of the autopoietic system, despite objections from Maturana and others that biological-spatial concepts are inapplicable to social reality. His laconic answer was that borrowing concepts from other disciplines is no problem at all, as long as these concepts are sufficiently abstract. This condition is satisfied in the case of individual psychic and social communication systems, according to Luhmann, because both kinds of systems (re)produce their own elements, respectively thoughts and communications. Of course, autopoietic systems have more characteristics, which would occupy Luhmann for many years, but this (re-) production of their own elements is a distinguishing feature and a key to the solution of the problem of nonsubstantialist change that had puzzled historicists since Herder.

To explain the relation between organic, psychic and communication systems Luhmann uses the idea of emergence claiming that complex systems have properties that are not present in lower level entities. Think of a heap of molecules transforming into a living cell. Although nobody has a satisfactory definition of “life” the concept is crucial for the distinction between inorganic and organic sciences. The same goes for “consciousness”, which marks the next step to behavioural sciences such as ethology, psychology, cognitive science, anthropology. What lacks in the classification of sciences is a general acceptance of

“communication” as an emergent property. Communication may be a vague concept, but so are life and consciousness. Moreover, vagueness is not a convincing argument for reducing social phenomena to individual consciousness systems, for this might start a train ending with the bizarre conclusion that everything is deducible to the study of elementary particles. Another, practical argument against psychological reductionism is that sociologists and historians can impossibly take billions of individual brains into account when they discuss for example a global financial crisis. Biological reductionism is undesirable as well, as the confusion between social-cultural and natural evolution shows.

Acceptance of the idea that social communication is an emergent phenomenon seems necessary for the development of a consistent theory of social evolution. It is not very helpful to base such a theory on the notion of natural evolution. Of course, there are biological constraints that we must keep in mind, but they cannot explain the enormous outburst of historical change since the Neolithic revolution down to the present. Individual human beings did not change that much in the last 10.000 years, but society all the more. This shows the need for a theory enabling us to explain the inherent dynamic of social life. Social Darwinism of the nineteenth and early twentieth century was a nonstarter. It just made historians wary of the concept of evolution, even though Darwin’s evolutionary mechanism was never applied consistently to society. The problem with many so-called evolutionary theories is that they keep focusing on humans beings, individually or collectively. If we shift our attention to communication, as Luhmann proposes, Darwin’s algorithm of variation, selection, and retention (an addition by Donald Campbell) seems eminently workable (Campbell, 1960). Variation occurs on the elementary level of communicative events; expectations and norms function as selection structures; and retention means that the system finally integrates successful structures. A good illustration would be the juridical system.

As in natural evolution, internal differentiation explains much of what happens in social evolution. It implies a recurrence of the distinction between system and environment in the system itself. The system becomes, in other words, an environment for its own subsystems. Internal differentiation is usually triggered by adaptation problems. If a system is at home in a certain niche, there is no need to become more complex, as is demonstrated by simple life forms hardly changing over millions of years. However, primates had to adapt to new circumstances, as we all know. They became more differentiated, not only physically but also in their social communication. Luhmann picks up the evolutionary thread, when human beings started to live in family based societies. He distinguishes three types of social differentiation, namely segmentary differentiation, social stratification, and functional differentiation. These types roughly correspond with the three communication phases of orality, chirigraphy and typography. The criterion of distinction is equal-unequal.

In a segmentary society, the basic units of families and clans are equal because they descend from the same ancestor and belong to the same kin group. In a stratified society like the Indian caste system or the European class society, the inequality of high and low birth is decisive. Theses societies were based on different kin groups, because the nobility dissociated itself from the people by means of endogamy. In modern society, the structure of social strata has given way to the differentiation of functional subsystems, which are equal in their inequality. Function systems are unequal in the sense that they fulfil unique tasks in the field of respectively religion, politics, law, science, economy, or art. At the same time they are equal in the sense that they are each indispensable and therefore hard to classify in

a ranking order. Modern society does no longer fit into a hierarchical model and could be more adequately described as a heterarchical network, which is characterized by lateral control.

It is impossible to sketch in detail Luhmann's contribution to the understanding of modern society, but an exception must be made for the subject of social self-description, which is of great concern to both sociologists and historians. Self-description is an important aspect of the closure of autopoietic systems. It is a paradoxical notion, because the "self" is taken at the same time as condition and result of the description. A good illustration is the psychological birth of the human infant. When a child is born and separated from its mother, it undergoes its first closure as an organic, autopoietic system. In psychological respect, however, the symbiosis holds on until the separation-individuation phase in the first year, when the child becomes able to make an internal representation of its mother and itself (Mahler & Pine & Bergman, 1975; Greenberg & Mitchell, 1983). This is the beginning of the closure of the psychic system and the growth of an inner self, which is crucial to the cognitive and emotional development of the human individual.

The mechanism of "double closure" also applies to social systems according to Luhmann. In order to establish their own identity most systems develop reflexive theories aiming at a "re-entry" of the distinction between system and environment in the system itself. By means of an inner symbolic representation of "self" and "other" or "ego" and "alter ego", the system acquires the ability to distinguish between self-reference and other-reference. The latter term may sound awkward but is more informative than "reference" tout court. The ability to discriminate between the two kinds of reference is crucial for a successful adaptation to the environment as defined by Jean Piaget's twin process of assimilation and accommodation.

An example of double closure in society is the use of political theory since Machiavelli (Luhmann, 2000). The disembedding of the political system had already started in the Middle Ages, when monarchs centralized political power and began to build bureaucratic structures. In the Early modern period, rulers obtained the exclusive right of legislation, which was the defining characteristic of sovereign power according to political thinkers like Jean Bodin and Thomas Hobbes. Making collective binding rules became the core business of politics. According to Luhmann, decision-making is a recursive process, in which each decision links up to earlier decisions while enabling further decisions in the future. This process contributed to the operational closure of "the state", as the political system began to describe itself. The boundary of the state was still disputed, though. The eighteenth century constitutional debate was decisive, because it realized a re-entry of the distinction between the political system and the rest of society in the political system itself. This re-entry enabled the political system to refer *internally* to "state" and "society", the last term being a shorthand label for all the other social subsystems. The result was an impressive self-limitation of political power, which is laid down in principles such as the separation of church and state, the separation of powers, a free economic market, academic freedom, freedom of the press, autonomous art, et cetera. In short, the constitutional state became the safeguard of the functionally differentiated society and the target of extremists who strived for de-differentiation by subordinating the entire society to one single subsystem, be it religion, politics, or the economy.

Reflexive theories are not to be found only in politics but in other functional systems as well, as Luhmann shows in a series of books on law, education, economy, religion, science, and art. Although they are often clad in an academic gown, they are first of all practical theories aiming at the self-description of a particular subsystem. This raises the question of the self-description of society as a whole. It seems that less practical forms of scholarship like history and sociology have a special task here. Despite their participation in the scientific and educational system, historians and sociologists are not directly committed to the viewpoint of a particular social subsystem. In this respect, they resemble Mannheim's "free-floating intellectuals." However, this does not mean that they take an elevated position enabling them to compare and integrate neutrally all specialist views on society. In fact, a "poly-contextural" society like ours knows of no neutral or higher positions. It would also be an error to think that sociologists and historians could somehow overlook society and define its identity. This idea is a relic from the traditional, pyramidal society.

The primary distinction of systems theory is no longer between part and whole but between system and environment. An important implication of this paradigm shift is that the identity of a system is definable only in terms of other systems. This creates a problem for the concept of society as an overarching communication system, especially today when only one, global society seems to be left. Before the modern age it made sense to speak about several societies living next to each other as cultural enclaves, but since the great discoveries and the European expansion the world has seen an increasing "disenclavement" (Chaunu, 1969). Nowadays, we live in a "world society" with globalizing function systems (Luhmann, 1997b). As a matter of fact, the concept of a world society raises the same problem as the concept of world history, mentioned earlier in this chapter. It does not allow for a wider context from which we could circumscribe our object. To be sure, society has a natural environment, but nature does not qualify as an external observation post because it is by definition beyond the reach of communication.

The conclusion is that a theory of modern society cannot but be self-referential and constructivist, which is in line with the premise that autopoietic systems create their own representations of reality. This does not mean, though, that there is nothing else than self-reference and constructivism. Luhmann rejects any accusation of solipsism (Luhmann, 1990, 61, 100, 304, 494). First, self-reference logically implies other-reference. It makes no sense to talk about a system without an environment and vice versa. Second, operational closure does not mean total closure. Autopoietic systems are open to stimuli and irritations from their environment, and although they use this input for an internal construction of the outside world (in-formation in a literal sense), it would be farfetched to say that they dream up this world. So, the accusation of solipsism often brought against Leibniz's "windowless monads" does not seem to apply here. Third, systems can communicate how they observe the world and thus correct each other's views. This is another difference with Leibniz. The evolutionary theory of communication makes his metaphysical concept of "pre-established harmony" superfluous. How systems are able to correct each other's observations will be explained below.

4. Second order observation

Closely connected to the concept of autopoietic systems is a new observation theory, which differs from the common empiricist understanding of observation. This is good news for

historians because their activities have never fit well in the category of empirical sciences. The point is that historians cannot literally see what they describe, except for contemporary events to some extent. The idea that historians gather empirical knowledge dates perhaps from the time in which they proceeded like reporters or political observers, which was common practice before the eighteenth century. The tradition that went back to Herodotus and Thucydides was based on the methodical principle of “autopsy” or seeing with your own eyes (Schepens, 1980). This classical understanding of history lived on in the Middle Ages as Isidore of Seville made clear in his *Etymologiae* from about 600 AD. Compiling all existing knowledge from Antiquity, Isidore also canonized the idea that the historian is someone who describes events he had witnessed and seen for himself (Ernst, 1957). Of course, medieval monks started their annals and chronicles dutifully with the Creation, but what really mattered was the recent history of their own monastery or Christianity at large.

To understand the pre-modern orientation towards the past something must be said about the traditional notion of time, that was founded on Aristotle’s distinction between rest and movement. The natural condition was rest, according to Aristotle, and movement or change was in need of explanation. Consequently, Aristotle’s cosmology started with the Unmoved Mover, who was an efficient and final cause at the same time, the alpha where everything begins and the omega where everything ends. Time was part of the creation. It was associated with movement and change and presupposed therefore the non-time of rest. This explains the basic distinction between *aeternitas* and *tempus*. Secular time was divided into past and future, of course, but this distinction had not the same fundamental meaning, which it has for us today. The modern meaning of time has to do without the concept of eternity. This concept became obsolete when traditional ontology gave way under the development of modern science. Galilei’s law of inertia reversed the relation between movement and rest. Movement became the normal condition, and rest something that asked for an explanation. Final causes abandoned the field and left behind a cosmos without an inherent purpose and meaning. When the belief in eternity dwindled, secular time came into its own and this explains why the distinction between past and future became more prominent. According to Luhmann and his Bielefeld colleague Reinhart Koselleck this intellectual revolution was part of the structural change from traditional to modern society (Luhmann, 1995; Luhmann, 1997a, 997-1016; Koselleck, 2004).

The distinction between past and future is relative to a present, which is logically speaking an excluded middle. The present is a moment at which we do not have time, because anything temporal seems already to have found a place in either past or future. In its timelessness, the present reminds of the earlier concept of eternity, with the difference that it is eternally shifting. The continuous constitution of time at the or, rather, a present is a paradoxical affair, not only because it takes place in time but also because the result is always relative to a present. Being two sides of the same distinction past and future are simultaneously present as horizons of the here and now, that is to say as *present past* and *present future*. This is paradoxical, of course, because past and future are by definition different from the present. According to Luhmann, historicists rendered this paradox harmless by introducing a new, opposing distinction between *past present* and *future present* (Luhmann, 1997a, 1074). They pointed out that each random point in past and future counts as a present in its own right. As already said, Ranke criticized authors like Voltaire for viewing the past through the lens of their own present. The implication was that historians should approach historical actors as persons living in *their* own present, equally ignorant about their own future as we are about ours.

This new consciousness of historical time partially explains why historians reconsidered their attitude towards the past. Another factor was that they became more critical about the use of historical sources and started to apply hermeneutic insights to the study of the past. An important pioneer was the German theologian Martin Chladenius, who lived in the first half of the eighteenth century. Inspired by Leibniz's idea that each monad has its own "point of view" Chladenius argued that comparison of sources might enable an interpreter to recognize and cancel out subjective distortions in descriptions of the same event(s) (Grondin, 2001). In this way, it might be possible to arrive at an objective reconstruction of what had really happened. This procedure became the basis of the so-called historical philological method, which focused exclusively on the study of written historical sources. Historians turned away from the idea that they should proceed as a kind of reporters, presenting first hand evidence on contemporary events. They became "scientific historians" specialised in the earlier periods of the past and leaving the recent past to amateurs and journalists. Only after the Second World War contemporary history would become part of the academic curriculum, which was an indication of the much-debated "crisis of historicism".

With hindsight, the historians of the early nineteenth century took a radical step from empirical observation to observing (results from) empirical observations. They became "second-order observers", to use a term that Maturana and Varela introduced together with their theory on autopoietic systems (Hollander, 2011). The term has its origin in a branch of cybernetics that specialized in biological or living systems and called itself "second order cybernetics". Whereas first order cybernetics had restricted itself to the observation of allopoietic machines, second order cybernetics observed autopoietic machines, which are observers in their own right. Autopoietic systems are objects that look back, so to speak. This entailed a rethinking of the traditional subject-object dichotomy. The distinction between first- and second order observation proved a helpful alternative.

Unwittingly, second order cybernetics picked up a thread from the hermeneutic tradition, a fact soon pointed out by sociologists, though (Schneider, 1991; Esposito, 1996). From the fifteenth century onwards, exegetes of the Bible and the Roman Law Corpus had already noticed that both writing and reading are circular processes in which one switches from part to whole and vice versa. This is the origin of the idea that text interpretation needs a "context". When historians developed the hermeneutic insights of theologians and jurists into an overall historical method, they transferred the notion of the context from the world of the book to the real world. In this way, they entangled themselves in a part-whole discussion that transformed the hermeneutic circle from a methodological into an epistemological and even ontological problem. Most historians clung to the Kantian notion of a transcendental subject, thinking that they could historicize the whole world except themselves, but in the end, they stumbled on the problem of universal history, which was discussed above. This brought the hermeneutic philosophers Martin Heidegger and Hans-Georg Gadamer to a reinterpretation of the hermeneutic circle.

Contrary to the Neokantian philosophers of his time, Heidegger took the distinction between subject and object not as an *explanans* but as an *explanandum*. In his philosophy, subject and object are embedded in an "ontological field" that can be clarified only by hermeneutic understanding. We can think here of the situation in which people are part of the whole they attempt to describe. In situations like this, it is unavoidable that the subject has a biased or prejudiced opinion about its object, but according to Heidegger we should

not judge this situation in a negative but a positive way (Heidegger, 1962). The foreknowledge (*Vorgriff*) of what has to be understood is a necessary starting point for asking questions and testing hypotheses. Applying Heidegger's ideas to history, Gadamer points out that we can criticize a tradition only if we are familiar with it in the first place. The aim of hermeneutic understanding is to estrange the familiar into something "objective". In short, the hermeneutic circle is not a vicious but a virtuous one, because it conditions our understanding of the world.

The "ontological turn" of Heidegger and Gadamer was, no doubt, an important contribution to hermeneutic philosophy, but another, rivalling contribution in the tradition of Wilhelm Dilthey's *Lebensphilosophie* needs mentioning too. Georg Misch, Dilthey's son in law, and Helmuth Plessner came with an "alternative hermeneutic" that paid more attention to the bodily and historical existence of the human being. They criticized Heidegger for not having broken completely with the subject philosophy. Especially Plessner was outspoken on this point. In his own magnum opus, bearing the telling title *The Levels of the Organic and Man*, he replaced the subject-object distinction with the distinction between organism and environment (Plessner, 1981; Grene, 1966). It is not possible to go further into his ideas here, but they show interesting connections between historical-hermeneutic thought and modern systems theory and anticipations of second order cybernetics. With hindsight, one can only be sorry for the fact that Plessner and his contemporaries had to work with the clumsy concept "life" and did not yet possess the technical concept of autopoiesis.

The distinction between the (organic) system and the environment seems rather straightforward, but a disconcerting question is who makes it. An external observer is undoubtedly qualified for that. But what about the system itself? Does a system involve itself in the observation of its environment?. It may know, of course, that there is a distinction, but the question is whether it is able to observe it. These questions explain the interest of second order cyberneticists in the logic of distinctions put forward by the mathematician George Spencer-Brown (Spencer-Brown, 1972). Foerster, Maturana, and especially Varela were enthusiastic about his work (Varela, 1979). Luhmann gave it a central place in his theory (Luhmann, 1990). He interpreted Spencer Brown's Boolean-like logic as an abstract observation theory that is applicable to divergent circumstances such as sensual perception, electronic devices and social systems. The basic idea is that observation is a combination of two operations presupposing each other, namely distinction and indication. Distinction implies a division of the world in two sides and indication is the marking of one of both sides, in the sense of "this" and not the rest. It will be clear that an indication is only possible when there is a distinction between two sides and, conversely, that a distinction makes only sense if at least one side is marked or indicated.

Leaving aside electronic switches, which were Spencer Brown's original field of research, we illustrate this abstract theory with the sensual perception of, say, a vase. When we perceive an object like this, we implicitly distinguish between figure (vase) and ground (room). Since we focus on the former, we are unaware of the fact that our perception is asymmetrical. We have eyes only for the vase, without realizing that it is merely a vase because of its contrast with the environment. If both sides of the distinction were black, we would see no contrast at all and fail to recognize the object in question. This raises an interesting question about the shape or form of the things that we perceive. Common sense tells us that a thing *has* a form, thus suggesting that a form is the property of the thing itself. According to the

observation theory under discussion, form is, rather, the distinction between a thing and its environment. This is an odd idea with far reaching consequences. It seems to imply for instance that a system is a function of itself and its environment, or $S = f(S, E)$.

In everyday situations, we are unaware of our perceiving the world asymmetrically. We notice it only if we observe ambiguous Gestalt images or engravings of M.C. Escher enabling us to alternate between figure and ground. A well-known example is Rubin's vase, which lets us choose what to see on the foreground: a vase or two faces. Another example is the rabbit-duck of Joseph Jastrow, used by Wittgenstein and later on by Thomas Kuhn in his discussion of the Gestalt switch (Wittgenstein, 1958; Kuhn, 1996). The clue is that we can see in the drawing either a rabbit or a duck, but not both figures at the same time. The so-called Necker cube with its typical flip-flop effect even better illustrates this oscillation. It clearly shows that each time we switch from one Gestalt to another our brain needs a pause to form the new pattern.

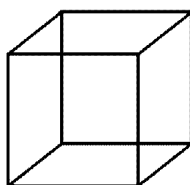


Fig. 1. Necker Cube

Examples like these confront us with the pertinent question how we know that we are dealing with two sides of the same distinction. What makes us think that the rabbit and the duck or the two views of the cube belong together, if we can see only one side of the distinction at the same time? The answer lies in our memory. Given the fact that we cannot see both sides simultaneously, it is the only possible explanation. The distinction is paradoxical because its logical structure presupposes the simultaneous presence of two sides, whereas in reality we need time to cross from one side to the other. An attempt to see "the unity of the distinction" or "the identity of the difference" would amount to eliminating the time factor, which is punished with an eternal oscillation, the same oscillation we encounter in paradoxes of the liar type. For example, "This sentence is false" is false if it is true and true if it is false. Generalizing from this, one might say that our way of observing "the world" obeys the same rule. If we try to see the world as an identity of subject and object, we end up with a paralyzing paradox.

Summing up, we may say that the distinction guiding all our observations remains itself unobservable, as a kind of blind spot. We know, of course, through communication with others, that there is a distinction between the environment and ourselves, but this is irrelevant to the observation theory under discussion. The crucial point is that we cannot *observe* it. For example, I cannot see what is behind my back right now. Only others are in the position to do this and to exclaim if necessary, "Watch out, behind you!" With the asymmetry between my position as an observer and the position of others, we arrive at the crucial difference between first and second order observation. Whereas I observe only my own environment, other people observe *me in my own environment*. They notice that I observe the world from a particular point of view, while I am unable to see this. This means that second order observation introduces an element of perspectivity and contingency in our way of observing.

A first order observer is necessarily self-centred and convinced that the world is as he sees it. He is prone to all sorts of “centrism” like egocentrism, geocentrism, ethnocentrism, and hodiecentrism. Second order observation on the other hand has a decentring effect. It does not only apply to situations in which people observe one another, but it can also take the form of self-observation. I can take a second order look at myself, but only after some time. Right now, I am unable to do this, because that would amount to an attempt to observe the very distinction that guides my observations. We can observe (distinguish!) a *Leitdifferenz* or guiding distinction only with the help of another *Leitdifferenz*. Only on this condition are we able to see both sides of a distinction at a single glance. This may happen in two ways. If we observe the *Leitdifferenz* of other people in the here and now, we follow a “social” approach coming so naturally that nobody has ever felt the need to take notice of it, except for cases in which cultural understanding becomes a problem. For these cases, we have specialist studies like cultural anthropology. The other possibility is the observation of our own *Leitdifferenz*, be it as an individual or as a group. Since we are unable to do this *in actu*, only a “temporal” or historical approach will do. Using our own memory or “experiential” records, like letters, photographs, diaries, and interviews, we may be able to reflect on how we perceived the world at earlier moments. This approach is typical for cultural history.

Studies like cultural anthropology and cultural history date from the late eighteenth and early nineteenth century. In that time, second order observation became a dominant cultural feature. This is not to say, that people did not observe in such a way before that time. As an individual performance, second order observation is as old as humanity itself. Socially and culturally, however, it was uncommon and even unacceptable for a long time, because the traditional ontology claimed orthodoxy for itself and not tolerating heterodox or “heretic” visions. Theologians had their own idea of second order observation, when they urged religious believers to look at themselves through the eyes of the Great Observer, an idea that is still present in the masonic symbol of the “all-seeing eye” (Luhmann, 1998). With hindsight, it seems like an anticipation of later developments.

The complexity of modern society explains why second order observation became to the fore. Important was, first, the fragmentation of the traditional worldview by the differentiation of functional subsystems having each their own perspective on society. A telling example is the conflict between the religious and the scientific worldview in the time of Bruno and Galilei. A second point is that second order observation realizes a reduction of social complexity by focusing on observations instead of events. First observation serves then as an intermediate layer for reaching the world. A second order observer can still see *what* first order observers see, albeit from a different perspective, but more important is that he can at the same time observe *how* they see it. This means that how-questions become important next to what-questions.

If we look at the natural and the social sciences, second order observation has different functions. In the natural sciences it serves as a means to standardize first order observations. Scientific experiments are arranged in such a way that researchers can expect the same result when they are repeating them. In social and cultural studies this controlled observation does not really work. A practical reason is that there is little room for experiments, but more important is that observation counts as a research object in its own right.

In the humanities and the social sciences second order observation usually means comparing the different worldviews of social and cultural groups. A case in point is the history of science, more in particular Thomas Kuhn's *The Structure of Scientific Revolutions* (1962). This book shows that even scientific observations are historical relative. Scientists and philosophers of science were shocked by Kuhn's concept of paradigms and are still struggling with it. Especially in English speaking countries, the word 'relativism' still is like a red rag to a bull. This is hard to imagine for adherents of the theory of second order observation, because to them it seems obvious that observations are always made by someone and from a certain point of view.

5. Conclusion

It was the aim of this article to show that Luhmann's social theory offers a solution for two problems in the tradition of historicist thought, the status of individual social wholes and the historical method with its relativistic consequences. To that end, I discussed two central concepts of this theory, respectively autopoietic systems and second order observation. To accentuate the similarities between historicism and Luhmann's version of functionalism I pointed out that Luhmann's "Sociological Enlightenment" has much in common with the tradition of romantic-historic thought and the older Leibnizian philosophy. Of course, there are differences as well and although they were not subject of discussion in this chapter, I want to point at an obvious contrast by way of epilogue. Contrary to sociologists historians are self-conscious storytellers, as Luhmann rightly though somewhat condescendingly notices (Luhmann, 1997a, 570). They can take advantage of a systems theory like Luhmann's, but only in their capacity of auctorial narrator. The theory may help them in asking the right questions and finding new structures, but it represents only the perspective of the present past, the voice-over so to speak. Historians should also pay attention to the viewpoint of the historical agent in his or her past present in order to keep the narrative lively. This explains why they are more interested in the past as such than sociologists are and why they will not soon give up the individual action perspective. The tension between the perspectives of present past and past present is and will probably remain an important ingredient of modern historiography.

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Section 2

Communities and Their Representations

The Significance of Intermediality in the Immortalization of the French Republican Nation (1789-1799)

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*De Barra, de Viala le sort nous fait envie
Ils sont morts, mais ils ont vaincu.
Le lâche accablé d'ans n'a point connu la vie:
Qui meurt pour le peuple a vécu.
Vous êtes vaillants, nous le sommes
Guidez-nous contre les tyrans
Les républicains sont des hommes,
Les esclaves sont des enfants.
Le Chant du Départ 1794 (Dauban 1869: 428)*

1. Introduction

Never before 1789 had the political education of a great nation like France been ruled by writers and artists (painters, sculptors, musicians, engravers and architects), the ones who probably gave the Revolution its peculiar attributes, besides infusing an unrivalled vigor into this event (B. de Huszar 1960: 1-18). The intellectual elite grew in Western Europe after the Reformation and countless generations of rational thinking culminated in France's radical political ideas during the 18th century, marking nineteenth-century politics. This social category, a class apart, was devoted to mental activity, culture and the preservation of the current order (Seton-Watson 1960: 41-50), at the same time that legitimately held power and authority through six distinct strategies: backing of beliefs and specific principles, naturalization and universalisation of a selective credo, disapproval of opposed ideas, exclusion of alternative lines of thought, and finally, the masking of reality to adjust it to the dominant interests (Eagleton 1997: 24).

These minorities, or national prophets according to Hans Kohn, were decisive in fixing inclusion and exclusion criteria within the community in order to restrict the access to power and decision making, subjugate the majority and interpret the national history with bias (Kohn 1946).

Consequently, intellectuals were the driving force capable of fostering the nation reconstruction and redefinition. This fact entailed two points: firstly, the nation State was

always articulated, thought and imagined in consonance with discourse, and secondly, the rapport between politics and intellectuals uncovered one of the mainstays of nationalism, namely, the understanding of the nation as a cultural and political entity. If before the French Revolution, the State as a political unity had remained totally disconnected from the nation as a cultural wholeness, their fusion opened a singular stage in the history of nation States (Cobban 1994: 245-50).

The success of this intellectual middle class undertaking depended on the masses cooperation, which explains why people were invited to partake of this historical project and why this invitation was written in the intelligible language that typified the populist nature of nationalism (Nairn 1994: 70-76). For example, writers became the public opinion leaders and began to play the role usually reserved for politicians. During the French Revolution, the abundant circulation of pamphlets and documents attempted to anger people against the king. In this sense, *L'Ami du peuple*, edited by Marat, was one of the most important newspapers inciting to rebellion and to Louis XVI's overthrow.

In sum, the artistic achievements of intellectuals were an unmistakable struggle to protect and systematize the cultural continuity of the nation as well as to legitimate all national discourses, whether literary, historical or critical. Thereby, the narrative of the nation began to be told and retold through national histories, literature, popular culture, that is to say, through a kind of art interested in providing stories, images, symbols and rituals that could portray identity as primordial, essential, unified and unchangeable (Valdés 2002: 71).

The relevance of this paper rests on its timelessness. Although at first sight, its scope might be quite restrictive, since its topic is limited to France and to a very concrete time range (between 1789 and 1799), in truth its reading will prove the contrary. Not only does the paper help to understand the foundations of nationalism and nation construction, given that France was a pioneer in this subject matter and a model for many other countries, but also to deepen into the current working of those nationalisms still functioning thanks to their drawing inspiration from the French prototype.

2. Delimiting the focus of the paper

A firm and stable culture invariably relies on an alliance among the divergent discourses that run through it and that guarantee the projection of this ideological structure on people. This means that the more a topic is repeated, the more effective and convincing becomes, since we cannot overlook the fact that persuasion is a forceful component in the cohesion of any culture. Generally speaking, this continuum among the various social spheres emanates from a cluster of formats, namely, different materials portraying events or/and people, whose thematic affinity makes them being the primary vehicle of the political apparatus, whether it is a well-established political system or a budding one. Under these circumstances, the French Revolution is admittedly a case to be taken into account. It set the groundwork for a fresh start that benefited from the crumbling and staggering monarchical landscape, and, as expected, its votaries built an intricate and thick network through the recurrence of a topic from dissimilar artistic devices such as paintings, engravings, caricatures, drawings, busts, theater plays, songs and music, festivals, coins, newspaper articles and sculptures. The intermediality of all these aesthetic expressions, as a motto

superimposed on a standard, conveyed just one and very simple message, that of the making of the French Republican nation during the period ranging from 1789 to 1799, that is to say, the French revolutionary years. Throughout this paper, we will pay particular regard to this subject and to the way French artists resorted to the body, both male and female, as a core concept encapsulating the republican citizen by drawing upon political strategies fraught with mental and emotional manipulation.

3. What is intermediality and how can we apply it to France?

Now that the main concern of this paper has been stated, our business will be first to cast some light on what we mean by “Intermediality” and on what this term implies. The *Oxford Dictionary* informs us that the Latin prefix “inter” stands basically for two meanings: on the one hand, “between and among”, while on the other “mutually and reciprocally”. In turn, “Mediality” can be decoded “as designating the interaction of technology, society, and cultural factors through which institutionalized media of communication [...] produce, transform and circulate symbols in everyday life” (Friesen and Hug 2009: 69). As a consequence, the merging of “inter” and “mediality”, namely, the fact of being between or among shared media “stresses the idea of a message perpetually crossing the boundaries separating media; a message that *is, i. e. exists, only as and through* an incessant movement, never attaining an ultimate shape, and living as many lives as the number of the media crossed” (Punzi 2007: 10). When broaching the subject of intermediality, we are making a step forward in dealing with relational properties as well as a shift from separate media to partially or totally interconnected media systems. This suggests that intermediality highlights “textual relations as a dialogic process taking place between different expressive media, rather than as a set of static references to textual artifacts” (Langford 2009: 10).

Although there was a resurgence of interest in media and the mediatic questions thanks to Sanders Peirce’s (1839-1914) work on proto-semiotic theory and to Ernst Cassirer’s (1874-1945) study on the mediality of culture and human knowledge in his *Philosophy of Symbolic Forms* (1953), it was Marshall McLuhan (1911-1980) who gave prominence to the current relevance of media with his claiming that “the medium is the message” (Friesen and Hug 2009: 63). Yet, even if intermediality is quite a new term in the contemporary panorama of criticism, it is a linguistic tag whose semantic field has not yet been thoroughly ascertained, despite the work done on this issue since 1997 by, among others, the “Centre de Recherche sur l’Intermédialité” (Montréal University) and the “Center for Philosophy and Arts” (Rotterdam University) (Punzi 2007: 10). Within this trend, the term *information literacy* has been recently driven to the forefront to encompass all textual analysis and to process any sign system transmitting any kind of information (Semali and Pailliotet 1999: 5).

As one might expect with all new terminology, intermediality is not a sudden concept but one whose history goes back to the dawn of Western thought. As a matter of fact, if Aristotle (384 BC-322 BC) was one of the first philosophers to consider the expression of diverse media in his *Poetics* (335 BC), his legacy was carried on afterwards by Horace (65 BC-8 BC) in his *Ars Poetica* (20-14 BC), in which he stated the close relationship between poetry and painting through his maxim *ut pictura poesis*, and by Augustine’s (354-430) *Confessions* (5th century) with his discussion of mediality of the biblical Word in Book 11. Examples spring up in abundance. Suffice it to mention that during the 15th and the 18th centuries, emblems became expressive of the blending between pictorial and verbal signs working conjointly in the same artifact.

It is to be noticed that each one of these communicative channels gave rise to a unified whole in which, curiously enough, the bonds among the constituents were not linear, straight and excluding but concomitant, unhierarchical and convergent. This was tantamount to admitting that the logic governing this system was polycentric and that the French art under survey could not by any means be compartmentalized but regarded as a flowing system, crossed by multifarious streams of information. Simply put, French art produced at that time a series of works which depended for their meaning on one another and on the historical context within which they were anchored. Failing to grasp the implications of references, whatever their nature, entailed missing the turning point in a work of art (Schmidt 2009: 64), but also the fit response to those issues in conjunction with knowledge, power, identity and politics, since the continuous fluctuation from one medium into another alluded to validations of being French.

This interweaving gains prominence when unveiling the underlying powerline operating beneath the surface. As an introductory note to bear in mind while reading the paper, it is imperative to point out that all French creations derived from two main sources: one of them was a historical subtext coming from either a distant historical period, such as the Roman Republic, or from the contemporary one with which they were intimately connected, whereas the other source was a pre-text, namely, a previous work of art from which the new aesthetic piece drew its meaning. Thus, French intermediality grew in complexity because of its scope expansion and its roots deepening into a horizontal as well as a vertical axis. This proves that all sorts of formats are constructions and to some extent, constructs, entailing transactions of meaning, given that readers, percipients, audiences, writers or artists do not ascribe interpretations in isolation. On the contrary, they bridge past and present understandings and recover background from other visual, verbal or plastic texts just to underscore the synergistic, interdependent and dynamic qualities of these processes (Semali and Pailliotet 1999: 6).

Granted that intermediality caters for a methodology to delve into the interstices and interfaces of cultural production and ideology, it will be used to read and to provide insights into the printed, visual, musical and plastic representations prevalent in revolutionary France. In sum, we will be engaged in an assorted display of performances (literary, musical, visual, pictorial) to show their behaving at the “borderlines of art” (Chapel and Kattenbelt 2006: 13) and to determine to what extent they conspired to concoct a plan of political action.

4. The Foundations of the French Republican Nation and national art

Plainly stated, the target of the newly born Republic was the construction of a renewed society whose foundations had to rest upon a groundbreaking basis. The inspirational source which informed that longed-for sense of dissolution and cleavage with respect to the previous age stemmed from the Roman Republic, with which politicians drew a straight line. For the French institutional frame, the Roman Republic stood for a paradigm, given that it had begun with the overthrow of the Roman monarchy roughly in 508 BC, and had lasted almost five hundred years until its substitution by the imperial government. Most importantly, this Republic embodied all the set of principles and values deemed to be essential for the French nation and citizenship. That is how one of the most enthralling but disquieting journeys back in time began.

As abovementioned, the architects of this building were the artists. Throughout this period there were two figures whose influence was so outstanding that not only did they shape and triumph over the revolutionary scene, but also they set the tone for all contemporary and future creativeness. Amazingly enough, one of them was dead and exercised his power unconsciously, whereas the other one was alive and managed deliberately his cunning empire. We are referring to Voltaire (1694-1778) and Jacques-Louis David (1748-1825) respectively, on whom the emphasis of this essay is partly (although not only) put because they were the first in using a series of recurrent motifs that rapidly spread all over the social scenario.

5. Voltaire's drama and Jacques-Louis David's painting as architects of the French Republican Nation

The springboard from which the republican enterprise was launched was Voltaire's theatre play *Brutus*, that although dated from 1730, it became the symbol *par excellence* of the Revolution. And the reason for this fact was deeply ingrained in David's *Brutus* (1789) that recovered the quintessence of Voltaire's drama both to strengthen the ideological ends and to foster the model of male virtue. Jacques-Louis David's paintings, particularly *The Oath of the Horatii* (1785) and *Brutus* (1789), were transformed into the icons of the Revolution and these works earned him status as the semi-official painter of the Jacobins, as well as a relevant member of the Convention, the Committee of Public Safety and the Art Committee. All this demonstrates that visual arts, drama and public celebrations and happenings were esteemed by the radicals as vehicles for public education in France.

David consecrated himself to illustrate Greek and Roman historical deeds since they exemplified, in the light of Revolution, the noble virtues of patriotism and the revolutionary ideal, the right of citizens to master their own destiny. One of the best samples of this type of art derived from *Brutus*, which was conceived in 1788 and prefigured, through the pictorial technique, the chasm between male and female identities, idiosyncratic of the revolutionary period. When David exhibited the painting in 1789 and 1791, critics realized that the work was divided into two parts: a dark one, in which Brutus remained alone, with his emotions under control, and another one, riddled with colour and light, in which the womanly figures of his wife, daughters and maids were crying before the dead bodies of the sacrificed sons for the Republic. Thereby, two thematic sides, one infused with rationality, the other with emotionality, respectively. The treason of Brutus' sons to the Republic was not merely an antagonism between father and son, but also a clash between traditional responsibilities, characteristic of the family, and new demands coming from the State. Brutus' dilemma on his patriarchal duty as his sons' guardian and his totally new republican engagement with the state maintenance is solved through his sons' sacrifice and through a coalition between the father's and the State's patriarchal body, appraised as an abstract principle identified with the State.

As far as *The Oath of the Horatii* is concerned, in which David painted three brothers swearing faithfulness to their father, it echoed the same ideological procedure as *Brutus*. This work brought Rome to the fore once again, in particular Tullius Hostilius' kingship (672-640 BC), during which the nearby kingdoms of Rome and Alba were at war. The three Horatii brothers (coming from Rome and ultimately winners), and the three Curatii brothers (coming from Alba) fought for their corresponding cities. However, one of the sisters of the

Curati, Sabina, was married to one of the Horatii, whereas one of the sisters of the Horatii, Camila, was engaged to one of the Curati.

David knew how to capture this drama and how to display the most supreme Roman virtue, that of putting loyalty to the State above personal concerns in spite of women's lamentations and affective bonds. In this intertwining of victory and misfortune, David juxtaposed the portrayal of family and the fatherly authority with that of the State, while transposing the political domain into the private one, and relegating women to a secondary position, that of domesticity. David's inherent statement is crystal clear: the family is the kernel of the State and each individual must play their role for the good of the nation; while men promise publicly to keep their words, women are mere spectators (Landes 1988: 154-58).

The full significance of these paintings comes afloat when appreciated with regard to the historical circumstances of the era, that is, when we learn that at that time, the National Convention abolished the old laws governing the social and political life in an effort to replace them with a new legislation subduing fathers and rulers' absolute power to the supreme authority of the State. According to this ideology, this political skeleton definitely abrogated the patriarchy to substitute it for a more democratic entity. As Carol Duncan contends in "Fallen Fathers: Images of Authority in Pre-Revolutionary French Art", the French Revolution was primarily concerned with annihilating the monarchy together with fathers and kings' supremacy as embodiments of inviolable rights, a measure foreshadowed in the arts since the outset of the 18th century. If for many years, artists exhibited paintings on and off about dethroned kings and outraged fathers, during the second half of the century, painters became very fond of portraying old people, symbols of the patriarchal authority and as such, revered in the western artistic tradition, to discredit them through their sons and servants' disobedience. And this tendency escalated during the French Revolution (Duncan 1981: 186-202).

Albeit the Directory's arrival (1795-1799) meant for David his temporary imprisonment and subsequent ostracization, and in 1798 and for the last time, the Council of Five Hundred commissioned a Brutus statue that was located in the Palais Bourbon. If from that date on, both Brutus and David's reputation declined, the truth is that Brutus' *leitmotiv* stirred up a thorough revolution that reached its zenith in 1793 and 1794, leaving its indelible mark in paintings, sculptures and graphic arts between 1795 and 1796. The loyalty to this Roman politician was so unshakable that his bust constantly presided over the Jacobin meetings and the revolutionary court rooms. Therefore, Brutus became the heart of the French nation since all events, all discussions and all political decisions were approved or invalidated taking as a model Brutus' behaviour as well as Voltaire's *Brutus*.

If David's *The Oath of the Horatii* and *Brutus* came to life as soon as 1785 and 1789, and forged the guiding tenets and the spirit of the Republic, paradoxically the unconscious precursor was born at the end of the previous century.

One of the most extraordinary events occurred on 17 and 19 November 1790 in Paris at the National Theatre, the days in which Voltaire's *Brutus*, published in 1730, was performed. During the second performance, David located a bust of Brutus coming from Rome on one side of the stage, and a bust of Voltaire by the sculptor Houdon (1741-1828) on the other, to pay them homage. From that moment on, David, Voltaire and the figure of Brutus formed a

triad, depictive of the French Revolution. The painter David was in charge of arranging the national tribute to Voltaire in 1791 during which certain passages of *Brutus* were read aloud, making of this play a cornerstone of the Revolution. Radicals retrieved Voltaire's writings for their political project and drew from them, specifically from *Brutus* (1730) and from *La Henriade* (1728), the revolutionary slogans for mass mobilization. The last representation of *Brutus* took place in 1799 (Herbert 1972).

Voltaire's literary rebirth during revolutionary and radical nationalism is really striking under the prism of his cosmopolitanism and ongoing attacks to any nationalist declaration. His dramas were so admired that if in 1778 the clergy had refused to give him burial in Paris due to his criticism to religious intolerance, in 1791 his remains were taken into the city and interred with the ostentation of an emperor.

As an aside, we must remark that the contribution of theatre to the promotion of the political scheme was colossal, since it sparked a shared participation in feelings and emotions of belonging to the same nation. More precisely, theatre performances, due to the simultaneous physical presence of both performers and spectators in the same mental space, opened a new stream of communication between the audience and the actors, whose pattern of behaviour fostered people's involvement while celebrating collective participation in the nascent social organization (Chappel and Kattenbelt 2006: 24). By reference to this, all kind of performing acts, such as *fêtes*, festivals, carnivals, parades or even music were communal means of inscribing and empowering the new kind of identity (Parker 1990: 38-39).

One could even go farther as to suggest that 1790 and 1791 were landmark years, as far as Voltaire's magnetism was concerned, in which the brotherhood between arts and politics came extraordinarily into play. In effect, the success of *Brutus* performance in November 1790 guaranteed Voltaire's apotheosis on 11 July 1791 and his pressing immortalization in different sorts of drawings to exalt the republican heritage. As if by magic, manifold renderings of the event appeared: *The Sarcophagus Transporting the Remains of Voltaire to the Panthéon on 11 July 1791* (anonymous aquatint, 1791), *The Transportation of Voltaire's Last Remains to the Panthéon* (watercolour or etching, 1791) by François Lagrenée the younger (1739-1821), *The Burial of Voltaire's Last Remains in the Panthéon* (oil on paper, 1791) by Pierre-Antoine de Machy (1723-1807), *The Triumph of Voltaire* (engraving and etching, 1791) by Antoine Duplessis (1725-1802), *Translation des manes de Voltaire, le 11 juillet 1791* (anonymous popular engraving) or *The Triumph of Voltaire, 11th July 1791* (etching, 1795) by Pierre-Gabriel Berthaul (1748-1819) after Jean-Louis Prieur's (1732/6-1795) engraving, *The Triumphal Procession of Voltaire on 11 July 1791* (1791). All these paintings emphasized the pageantry of the procession in emulation of classical models: participants were clothed in togas and tunics and bore military standards while Voltaire's carriage was drawn by horses. In fact, these painters strove to equal the intention behind Jacques Cellier's (1742-1814) spectacular display, responsible for stage-managing the ceremony.

6. Following Voltaire and David's steps, or how other forms of art contributed to nation building

In essence, the interplay between politics and the pictorial tradition shrewdly showed to what extent visual devices could conspire to serve several purposes: firstly, to typify the National Assembly's deputies as the restorers of the Roman republican legacy and to state

that the triumphal funerary procession was the paradigm of a new era; secondly, to confirm that the Revolution fell heavily upon the Enlightenment and consequently, that its promises had been fulfilled; and thirdly, to manifest that the cortege had been for the glorification of a mere bourgeois, an ordinary man whose literary achievements had been acknowledged. Accordingly, Voltaire's exequies put an end to the sovereignty of Absolute Monarchy while warmly welcomed the reputed democratic cult of the Great Man, subject which had already been approached by the Abbé de Saint-Pierre (1658-1743) in *Discours sur les différences des grands hommes* (1739). Nonetheless, it is to be remembered that this sort of men veneration was not equivalent to individualism and respect for those ideas that could deviate from the political paradigm. On the contrary, the nature of the Revolution, materialized in the Declaration of the Rights of Men and Citizen, pretended to champion the entrance into a new world in which all those principles were thriving, when actually the infallibility assertion of the General Will, theorized by Rousseau, and of the Reason of State, in parallel with the whole submission to them, gave way to the recasting of the *Ancien Régime* and the reinterpretation of the Divine Right of Kings disguised in republican clothing (Strenski 2002: 56). Well equipped formulas arose, but all of them were borrowed from the past.

This crusade against Absolutism prevailed over the arts. For example, let us take a look at the satirical print *Le Faux Pas*, an anonymous colored etching that dated from July 1791 and that spread extensively in the autumn of 1791. The title of this caricature alluded to Louis XVI's false step or failed attempt to escape Paris on 21 June 1791; after his failure, Fame is proclaiming with an out of tune fanfare under the inscription "the day of 21 June" that Louis XVI's heyday has vanished while she is contributing to it by kicking the royal bust off its column. Conversely, a sweet music heralds the onset of a more tolerant government, that of Voltaire, who, placed on a pedestal and enclosed by a halo of stars, is finally admitted into the Panthéon as an immortal being. A similar process occurred with another of the most mighty and persuasive epitomes of the Revolution, the statue of Hercules, the anti-prototype of monarchy and emblem of the power of the masses, although it enjoyed a relatively short life on the revolutionary arena since it was modeled in 1793 and by 1795 it had already disappeared.

If undeniably the indestructibility of a society lies on its legitimacy, this latter notion springs in turn from a cultural framework or a sort of master fiction that allows it to define itself and to diffuse hegemony. Furthermore, this cultural fiction revolves around a central point from which it draws inspiration while concurrently nourishing in citizens a sense of rootedness and community. If under the Old Regime, monarchy and the king's body acted as supports of a hierarchical order, the French Revolution not only defied this Regime's political authority, but it called into question its cultural foundations, thoroughly undermining the established social structure and giving birth to an emptiness in its place. Once again, it was the painter David who in 1793 propounded to the Convention the statue-making of Hercules both to encapsulate the French nation and the new Republic (Hunt 1983: 95-117). After all, we cannot ignore that sculptures took an active part, as all the rest of artistic expressions did, in the political program of the hour. Notice for example that due to their strong didacticism, sculptures were regarded by Quatremère de Quincy (1755-1849), arts administrator and writer on art during the Revolution, as agents of Christian moral instruction. Similarly, it was about increasing the didactic effect of art on masses.

Nonetheless, scrutinizing Hercules' previous uses as a social symbol is rather a bewildering practice, to say the least. Hercules, the ancient Greek hero who symbolized strength and power, was first adopted by the Old Regime to represent the sovereignty of the Bourbon monarchs. Contrary to expectations, during the Revolution, this same Hercules was revamped to adjust to the incipient revolutionary credo and its promising moral system. In this respect, Hercules' first appearance during the festival commemorating the National Assembly's victory over federalism on August 10 1793 was a turning point in encouraging the French Republic scheme: Hercules' sway just mirrored the rule of the French people, the superiority of the nation and the opening of a new age resulting in liberty over oppression. As all was designed with a concrete political goal in mind, the ground behind Hercules' choosing was found in the fact that he was an acclaimed mythological figure, reminiscent of the republican and democratic ideals prevalent in the classical age, which had been used by the monarchy in subsequent centuries and therefore could be easily recognizable in people's minds (Reichardt and Kohle 2008: 13-16, 27-28).

Even though the so-called new Hercules seemed to break with former traditions, ultimately they fuelled each other. As his monarchical counterpart, Hercules was an absolutist allegory and panegyric of the ruler's might and violence, which in this case was not Louis XVI but the sovereign people who had dethroned him in 1792. This was the drive underlying Guillaume Boichot's (1735-1814) sculpture, *The Power of the Emblem of Hercules* (1795), who tried to parallel Jean Valdor's (1606-1673) engraving, *The Gallic Hercules* (1649), in which he had depicted Louis XIV as a seated Hercules. Two years before Boichot's sculpture, in 1793, the newspaper *Révolutions de Paris* widely disseminated an etching called *The People Eats the King* in which the colossal figure of a plebeian Hercules, with the cap of liberty, safeguarded the Republic walls while beating a little king before throwing him onto an expiatory altar, full of flames.

If Hercules statue first appeared in 1793, it was preceded by another statue that bore enormous implications for the constitution of the new Republic. During the second stage of the Revolution (the Legislative Assembly, 1791-1792), particularly in 1792, the image of an ideal citizen called Marianne came forth, strongly affecting the course of daily life through her steadfast and notorious presence: she was everywhere, in newspaper drawings, coins, public sculptures or paintings to name but a few formats, to cry out for a bright beginning, exemplified in the national collectivity. Marianne's most outstanding body part was her full and naked breasts, symbol of women's nursing and nurturing powers, attainable to all people, since at her core she personified the motherland and the lap in which those heroes dying for the fatherland could sleep forever. More significantly, she stood for as a political metaphor joining human beings in their multiplicity, thanks to the permanent values she transmitted, "Liberty, Equality and Fraternity", that in the long run helped to construct a gradual adherence and attachment to the French Republic. Yet, as the Republic radicalized with the Convention (1792-1795), the cult of Reason was introduced and women were expelled from the public sphere since their growing political involvement meant a threat to the monopoly of men, it was required to leave room for Hercules statue, the male warrior whose violence illustrated the irrationality of the Reign of Terror (1793-1794). Additionally, the movement from Marianne to Hercules was just the evolution from domesticity to militarism, from a certain tolerance to a high handed submissiveness.

7. The role of the body, gender matters and emotions in revolutionary politics

Once we have journeyed through some of the dissimilar modes upon which the French nation was built, we will explore the importance of gender matters in the reinforcement of revolutionary politics so as to grasp an overall perspective and thereby, to unravel many of its deep-seated causes. Our starting argument is that the ideological program of the French Revolution focused on the coalition between gender and discourse, hinting at the correspondence between women and mother in their reproductive functions and men and father as guardians of the nation by fighting at war. In this vein, one of the bastions of nationalism hinged on the body and consequently, on the somatic construction of the nation. The close identification between the two facets of the body, the private and the public one, justified the way in which corporeity was transformed into a key political resource in Western culture. The body became the icon of social and State order and acted as a vehicle through which power and authority were enforced, State sovereignty redefined and middle-class culture and politics outlined.

According to Dorinda Outram, the French Revolution occasioned an abrupt metamorphosis in the identification with individual bodies that ended up affecting the arrangement and evolution of nineteenth-century public space. And this was the corollary of the middle-class cultural and political triumph over monarchy and aristocracy, which confirmed the necessity of producing new practices and new political symbols. It was not a question of merely discarding overnight monarchical institutions but of ratifying the new politics within an appropriate communal and confident context, constantly examined and exposed to the critical eye. Undoubtedly, this was an arduous task, notably when the social circle had been dominated by the king's political body for so many centuries. However, the inadequacy to found enduring government organs stemmed in turn from the backwardness of the French Industrialization that paralyzed both the national economy and the establishment of the modern State. Even if the Revolution was unable to give form, accurately speaking, to the State in itself, it was successful enough in defining the limits of the French public setting, which immediately was provided with an overflow of middle-class discourses (Outram 1989). And definitely the flowering of these discourses went hand in hand with political propaganda, namely, popular art in its heterogeneous manifestations as caricatures, engravings or cartoons; in sum, print images quickly understandable by the masses to which the middle class recurred to carve a place for itself. In 1792 Jacques-Marie Boyer-Brun, a royal journalist and vitriolic polemicist, published a book entitled *Histoire des caricatures de la révolte des Français* in which he stated the hidden maneuvering of pictorial publicity: "It has been observed that in all revolutions, caricatures have been used to mobilize the people, and no one could deny that that procedure is as treacherous as its effects are swift and terrible" (quoted in Reichardt and Kohle 2008: 35). This printmaking indoctrination, called the new malady, broadcasted the ideology of liberty and equality while replacing the propagandist role of religion, propaganda fide. In 1792, French radicals began to enlist Reason's "apostles" to accomplish an ambitious political agenda that demanded the comprehensive regeneration of the French nation and the corresponding birth of a new man, the republican citizen (Hunt 1980: 11-13). However contradictory this may seem, the Revolution preserved the Old Regime's pattern in two ways: on the one hand, it endeavoured to distribute the monarch's body features through the new political body, and on the other, it ascribed the value system to renowned individuals following the Old Regime's example, that of associating public and heroic dignity with monarchy and

aristocracy. And this was a measure geared to bring politics to the fore to orchestrate revolution and to fuel mass mobilizations.

The revolutionary discourse was distinguished thanks to the invocation of absolute and opposed terms such as vice/virtue, aristocracy/people, private/ public sphere, and through corporal images infused with a moral and historical meaning. But this seems unintelligible without disclosing two factors: firstly, the influence of man in his double nature, public and brave, based on the body exclusion of women, and secondly, the honorableness of the middle-class that grew out of the removal of the bodies of the lower classes. And in fact, this process was not anything new since the French nobility had been securing its prestige through the spread of literary images confronting the aristocratic superiority with folk inferiority. Consequently, middle-class legitimation grabbed hold of the Old Regime's tactics. The middle class became the point of reference and attracted people's attention, while controlling the bodies of the rest of the social classes through a constant visual examination. From this viewpoint, cultural politics and cultural medicine alike with its insistence on health and cleanliness were the effect of the body desacralization, of the attempt to erase any theological conviction from it and simultaneously, to pervade bodies with the political doctrine and the interest in citizens as products, commodities and agents of social agreement. It is important to heed that this desacralization historically happened when the revolutionary order deprived the Catholic Church of her conspicuous position within the State, seized her properties and transformed her into a State organ through the 1790 Civil Constitution of the Clergy.

To summarize, during the Revolution the archetype of the national citizen that tended to dominate the European scenario emerged in all those countries in which the construction of national identity was evolving: it was a sort of individual, willing to give their life, emotions and particular interests to their fatherland, always loyal to the national precepts and all the time involved in political and public affairs. Among the most supreme national responsibilities, life offered to the country stood out as a synonym of a citizen's foremost virtue, that of freedom and boldness. As we have seen, the teaching of this idea could be traced back to Brutus and to the Romans, whose behaviour was a paradigm of masculinity and citizenship, although to tell the whole truth the communication between nation and male and heroic virtues was forged through what could be termed the eroticism of death, which was presented in a fascinating way. Alexander Potts approaches this subject matter in "Beautiful Bodies and Dying Heroes: Images of Ideal Manhood in the French Revolution" where he accounts for the tensions and clashes between the voluptuous aesthetic that surrounded the marble statues of the old masters and the male fantasies about a public and chivalrous life, perceptible in the Greek and Roman Republic. This symbiosis between desire and duty played a crucial role during the radical Jacobin phase of the French Revolution, to which the painter David and the German historian J.J. Winckelman (1717-1768), both fundamentalists of the cult to antiquity, contributed. Whereas the former blended the ideal of classical beauty with a radical republicanism, the latter spent the decade, covering the years between 1750 and 1760, writing on the enticing vision of Greek beauty which, according to him, was connected with the political liberty of Greek States. Hence, revolutionary politicians bombarded people with this brotherhood between the classical aesthetic and the politics of freedom. Not coincidentally, two of their most straightforward instances flew from two French insurgents, whose tragic histories made them national heroes and earned them a prominent place in art.

David's *The Death of Bara* (1794), produced in the climax of the Jacobin veneration for martyrs, meant the consummation of a well-matured and carefully devised myth for currying the favor with the mob and moving them into action. This myth originated with the newspaper reading before the Convention on December 1793 of Joseph Bara's (1779-1793) death, a young republican soldier who had died in a fight against the royalists. His demise was seized on as a propaganda opportunity by Robespierre who skillfully distorted the facts to adjust them to the political ideology, turning him into a figure that revolted against the tyranny of the Old Regime at the cost of death. Days afterwards, in a discourse delivered before the Convention, Robespierre transformed Bara's death into an exemplar drama of virtue and sacrifice, showing that the boy had fallen crying "Long live the Republic!" instead of "Long live the King!" The following months witnessed how David widened the scope of this verbal and visual rhetoric with the official commemoration of Bara together with another young soldier, Viala (1780-1793), who paradoxically had expired before Bara, in July 1793, but whose memory was not invoked by Robespierre until April or May 1794. Regardless of this brief omission, both Bara and Viala were proposed to be admitted into the Panthéon, and though the ritual was postponed and finally cancelled, that did not prevent Claude-François de Payan (1766-1794) from publishing a *Précis historique sur Agricole Viala* (1794). Both Bara's and Viala's rising popularity was reinforced by the organizing of a civic festival in their honour. Hence, French society embarked on a permanent attempt to exalt Viala: an engraving of his face was omnipresent in all primary schools, Pierre-Michel Alix (1762-1817) composed a Viala's head-and-shoulders portrait, and Louis Emmanuel Jadin (1768-1853) wrote the play *Agricole Viala, or The young hero of the Durance*, which was performed in Paris on 1 July 1794. But not only that, in 1794, Étienne Nicolas Méhul (1763-1817) and Marie-Joseph Chénier (1764-1811) released *The Chant du Départ* or *Song of Departure*, a revolutionary and war song that converted into the national anthem of the First Empire (1804-1815) and gave even more protagonism to Bara and Viala, mentioned in the fourth stanza. Last but not least, in 1795 a ship was named after Viala.

Bara's and Viala's pictorial portrayal combined the contradiction between the body as a focal point of desire and pleasure with the republican citizen's ideal subjectivity, suited to a new kind of symbolism and a new kind of mass medium, that of men subjected to the nation's will with which the male audience was supposed to identify. In *History of the Art of Antiquity* (1764), Winckelmann put forward two reading categories on the male body that had a determinant influence on the meanings imputed by revolutionary politicians to the naked bodies during the 1790's in the French Neoclassical Art: on the one hand, beauty seen through the spectacle of death as an expression of violence, and on the other, the grandeur of beauty through youngsters' anatomy. This trend was a sign of the way French liberty was altered and discredited into a distressing and destructive space in which art was politicized and politics conflated with manipulation. From this angle, Bara's and Viala's bodies were not just beautiful in their youth, but also graceful and statuesque in their degraded natures, shorn of life. This blending of beauty and violence, or to express it otherwise, the encounter between prowess and mortality, one of the chief features of radical Jacobinism, was divulged by the Committee of Public Safety on 12 July 1794 through the locution "Qu'il est beau de mourir pour la Patrie" or "Sweet and honorable it is, to die for the fatherland!". This message, apart from a range of others, was part and parcel of the revolutionary blueprint, nurtured by the middle class as an effort to assert itself in power (Potts 1990: 1-21).

8. The relevance of pedagogy to national identity

On the face of it, the consolidation of the middle-class power, besides the revolutionary strategy, was by necessity inextricably linked to the rehabilitation of pedagogy, an organic relationship whose existence had already been acknowledged by Rousseau (1712-1778) in *Émile* (1762) and in *The Social Contract* (1762). More accurately still, he considered the latter to be an appendix to the former, since his treatise on education contained the most important principles of his system, hinting at the fact that education and politics were wheels of the same machinery, a commonplace disposition during the Enlightenment and a point on which most philosophers agreed. Curiously enough, Rousseau's pedagogy and by extension that of the Enlightenment and of the entire age overwhelmingly favored the invasion of the private psychic space, while never appearing to do so, together with an intimidating socialization, since the anthropological and self-assertive beliefs current at that time viewed children as passive entities apt to be modified in perfect accordance with the political mechanism. In fact, by 1755 in his *Discourse on Political Economy* Rousseau had plainly ensured that "the most absolute form of authority is that which penetrates the inner man, and has as much influence on his will as on his actions" (1999: 13-14). No wonder then that one of the most recurrent metaphors of the period was the image of the person as wax or as clay in the hands of the potter. As De La Fare claimed in *Le Gouverneur, ou Essai sur l'Éducation* (1768): "leurs jeunes coeurs étaient entre mes mains une cire molle et flexible que je pétrifiais, pour ainsi dire, à mon gré..." (1768: 4). Nor is this likely to surprise that most theoreticians fastened themselves on this pedagogical thinking, and that it was a constant in their writings: from Helvétius (1715-1771) in *De l'Homme* (1773), through the Treatises of d'Holbach (1723-1789), Condorcet (1743-1794) or Bentham (1748-1832) to Philippon de la Madeleine (1734-1818) in *Vues patriotiques sur l'Éducation du Peuple tant des villes que des campagnes...* (1783). It is worth remarking that the pressing need to conserve power triggered off a whole doctrine concerned with conditioning the inner self of human beings, but surreptitiously, that is, unbeknownst to people. This cryptic script chanted hopeful and optimistic songs while indeed in practice talked about deliberately negating human will, freedom, responsibility, dignity and the like, so recurrently that it became the official view during the French Revolution. This sort of delirium was appreciated in the usual terminology; words such as *passive agent*, *generous egoism* and *compulsory volunteer* may seem preposterous although a penetrating gaze is definitely distressing. Accordingly, the Directory issued a decree in which people were encouraged to participate actively in public celebrations. However, the language was so menacing that enthusiasm sounded almost like a threat, granted that it was supposed to be obligatory. Although many thinkers raised their voices against this apparent injustice after sharply observing its latent malevolence, they failed to escape from it. This was the case of Mme. de Staël (1766-1817) whose double posture made her ostensibly approve of free will when at heart she gave inadvertently more strength to the manipulative line of reasoning. Yet, if de Staël harshly vituperated against these linguistic traps, Robespierre (1758-1794) and La Révellière (1753-1824) openly resorted to this oratory to arouse their fellow men. The worst of it was that this ideological engineering was legitimate in the eyes of politicians and lawmakers, since it was motivated by good intentions and done for the best of reasons (Martin 2003: 200).

The conscious struggle to construct a new society from scratch meant that politicians knew perfectly well what they were doing. Indeed, they were fully conscious that emotions were an inalienable condition for the success of the Revolution. This is what Gustave Le Bon

argues in *The Psychology of Revolution* where he declares that despite the rational origins of any social and political upheaval, any cataclysm is only unchained when its arguments have been transformed into sentiments and are ripe for galvanizing the crowd. The unique vehicle that can give man the power to act comes from the energy of affective and mystic factors in charge of sustaining political and religious beliefs. Furthermore, this kind of beliefs constitutes an act of faith unfolded in unconsciousness over which reason has no command and all effort is thwarted. This explains why this act of faith, which can be equated with an absolute truth, becomes inevitably intolerant and why in the name of conviction people are eager to sacrifice all, even their life. Though all great revolutions start from the top and the elite is the point of departure, revolutionaries were acquainted with the fact that the multitude was the agent that would make the disorder progress. In order to reach this goal, they strove to erect the multitude into a mystic entity on which all powers, virtues and adulation were conferred (Le Bon 2007: 12-40).

9. Conclusion

As a way of summarizing, we would like to conclude by saying that in that constructive process, art proved to be, owing to its powerful realism, ideally suited to the development of contemporaneous events, and especially to the sense of rupture with the past. Artists became highly politicized and resorted to media artifacts to reconstitute a new social order and a new citizen concept by the systematic and regular arrangement of events, celebrations, festivals, and by fostering popular journalism, republican clubs and a myriad of artistic vehicles in an attempt to interlace a tight ideological web. This network was ruled by a sort of language consecrated to fix the proper boundaries of the new social and political fabric. As we have seen throughout this paper, intermediality can be pointed up as a brand new type of symbolism attuned to the people, as well as a new mass medium for the time. The brotherhood among words, images, or sounds helped people pass through the national experience and project themselves into the future, immortalizing France meanwhile.

As shown throughout this paper, intermediality proves to be a very useful resource in the hands of politicians, at any time in history, to arrange and give form to the social body. This comprehensive strategy explains to what extent all of us are immersed in a culture that is delimited and circumscribed by discourses that fix for people beforehand what they are supposed to think, feel or how to react to specific forms of art. Liberation and independence from ideological structures only comes afloat when we become more self aware of their *modus operandi* and are able to develop in turn a plan of action to transcend them. (For more information on the concept of intermediality, please see Tötösy, López-Varela, Saussy, and Mieszkowski 2011).

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Western and Eastern Ur-Topias: Communities and Nostalgia

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1. Introduction

In Western civilization, the prefix 'Ur' is often used as metaphor to refer to a primitive, seminal, or prototypical example of an artistic representation, concept or idea. The associations of the word can be traced back to Sumerian sources and the origins of Indo-European civilization. Ur is considered by many to be the city of Ur-Kasdim mentioned in the Book of Genesis as the birthplace of the patriarch Abram (Abraham). The existence of cities can be traced back in antiquity to the important role of communities such as Memphis, Babylon, Thebes, Athens, Sparta, Mohenjodaro or Anuradhapura, among others. Rome was perhaps the first city to reach a population of one million around the time of Christ. Only in 1800 did London become the second city to reach this size. At that time only two percent of the world's population was urbanized.

Communities are not just defined in political and economic terms: cultural issues, perceptions, and foci contribute to give identity to the community, whether a village, a city, or a nation. Mirrors of cultural change, artistic representations offer insights into the way humans have transformed their living spaces. Works by artists, poets, novelists, visual artists, etc., helps unveil the distinctiveness in the way communities are viewed. The term *mindscape*, used to refer to human communities, refers to structures for thinking about human spaces built on conceptualisations of their physical landscape, whether urban or rural, and more recently virtual, as well as on their images as transported through cultural representation, memory, and imagination in different media formats. (see López-Varela & Net 2009)

Mindscales, whether cityscapes, landscapes or hyperspaces are, among other things, patterns of attitudes and ritualized behaviour; networks of human connections, of customs and traditions inscribed in certain practices and discourses, both internal and external. They suggest the "raw material for the symbols and collective memories of group communication" (Lynch 4), being "among other things, a state of mind, an order of morality, a pattern of attitudes and ritualized behaviour, a network of human connections, and a body of customs and traditions inscribed in certain practices and discourses." (Zhang 3-4) J. Hillis Miller has proposed that every narrative without exception, even the most abstract one, "traces out in its course an arrangement of places, dwellings, and rooms joined by paths and roads" (Miller 10),

that is, it develops in a spatio-temporal framework. This framework exists through human involvement and, as Tom Henighan emphasises, even natural space is rendered from a human point of view and therefore must be understood as the expression of humans who occupy a certain place in and have a certain perspective on the real space of nature (Henighan 5).

In recent years, it is significant the number of studies that have focused on the cultural ideas of a community since practical outcomes of such an analysis may further our understanding of human dynamics such as 1) how the relationship between urban scenery may affect people's sense of belonging; 2) how after urban change and migratory movements, civic memory may still retain remembrances representative of the community; 3) how the dynamics of change whether environmental, technological, or cultural should ensure social justice and sustainable communities; and 4) how urban issues may affect conflict resolution between individual and communal demands such as mobility, equity, etc.

By 2050, the world population is expected to increase to a total of 9 billion, while the population living in urban areas is projected to grow by 2.9 billion, to a total of 6.3 billion. It is inevitable that this rapid increase of urban population will bring enormous economic, social and environmental pressures, resulting in a need for governments to take urgent measures. Against this backdrop, the United Nations Centre for Regional Development (UNCRD) is refocusing its work towards sustainable urban development. The UNU Institute of Advanced Studies (UNU-IAS) is also taking an active role in the sustainable urban development dialogue.

Although urban growth rates are slowing down in most regions of the developing world, levels of urbanisation are expected to rise, with the least urbanised regions of Asia and Africa transforming from largely rural societies to predominantly urban regions during the course of this century. By 2050, the urban population of the developing world will be 5.3 billion; Asia alone will host 63 percent of the world's urban population (3.3 billion people) and Africa, with an urban population of 1.2 billion, will be home to nearly a quarter of the world urban population. In sharp contrast, the phenomenon of shrinking urban populations can be observed in some cities in the developing world. Some issues to attend to include: greening the local economy; creating a green job work force; providing sustainable urban transport options; developing resource efficient buildings; implementing ICT solutions for smart and connected cities; and fostering waste minimization through a recycling-based society.

The focus of this paper is to trace and overview of artistic representations, fiction narrative and poetry in particular, which offer vision of human communities. Urban mindscapes oscillate generally between utopian ideas of garden cities and critical views of industrial environments. The study will review literature in the West and compare it to the case of contemporary India. The multiplicity of Indian modernity has allowed the emergence of very diverse mindscapes where indigenous values and symbols are preserved in the artistic practices of smaller communities. One example is the *UttarAdhunik School of poetry* in West Bengal. The graphic depictions and texts by one of its most relevant figures, Anjan Sen, redirects our thinking from the cityscape, territorially located, to the ever flowing migratory movements and other human settlements closer to nature. Artistic representations are an ideal medium for diasporic groups who frequently challenge the hegemonic memories established by dominant powers. It is through a kind of nostalgic lens that these collective

memories are remembered and that postcolonial writers are able to redefine spatial history. Between the lines of this paper the varied meanings of 'modernity' for various segments of society emerge not just as cultural ideologies but also as political actions seeking to redefine the economic landscapes of our global world.

2. Asia: a look toward the East of Eden

Cities are large cultural and spatial systems, characterised by particular social, economic, and political practices and the power relations emerging from them. Four roles stand out: a) The city as an engine of economic growth, trade and transformation, b) The city as a social change agent and the crucible of innovation and adaptation; cities as centres of successful, dynamic progressive governance; c) The city, facilitating the exchange of ideas, goods and services, community experience and practices; d) The city as leader in healing environmental damage, championing public health, fair food production/distribution, enabling social equity to increase and as focus of global communication.

By the year 1900, only about 15 percent of the population or just 250 million people, lived and worked in urban areas, around 30 percent of India's population today. Over the next 100 years, the 250 million urban dwellers became 2.8 billion (49% of India's population now). This shows the unprecedented pace of urbanization in the 20th-century. It is surprising that the world has been able to cope with this rapid increase, and it is no surprise that the city appears prominently in all kinds of artistic and cultural representations. Geographically, the focus of change is now Asia and Africa. Europe and North-America experienced rapid urbanization in the 19th-century and early 20th-century. Latin-America followed in the second half of the 20th-century. By 2030 about 55% of the total world urban population will be in Asia. Recently, China has demonstrated an unprecedented constructive transition from an agrarian economy to an industrial society, from rural communities to urban settlements, from isolated towns and villages to a system of metropolitan communities. Demography is fundamental because, as history has many times demonstrated, the most populous countries are potentially the most powerful in terms of active workers. This power is correlated to the territorial distribution of the population as in the cases of China and India. History is important in both countries which are also places of very ancient civilizations.

The history of Chinese urbanisation is essentially endogenous (moving from the Yellow River to the Yangtze basin). In India the movement also started in the Indus and Ganges plains but the expansion was mostly determined by invaders coming from central Asia in the 13th century to establish the Delhi sultanate, then by the Moghol empire as of 1526, and the British colonisation from the end of the 18th century to the creation of New Delhi. In both cases the urban wave has moved from north to south. India's demographic growth is much faster than China's, due to a lack of family planning. The present growth rate of the population in India is estimated at 1.4 percent per annum, compared to a low 0.58 percent in China. The rates of urban growth are 2.7 percent per year in China (going down towards 2 percent) and 2.4 percent in India (going up towards 2.6 percent). In 2030, according to UN projections, China should be 62 percent urban and India 41 percent. The two countries have the same number of cities of more than five million people (eight). In China the largest cities are distributed along the coast: Shanghai, Beijing, Guangzhou, Shenzhen, Tianjin, Hong Kong, Wuhan and Chongqing. In India the hexagon Mumbai, Delhi Kolkata, Chennai, Bangalore, Ahmedabad and Pune covers almost the entire country. China and India demonstrate that

cities are simultaneously the cause and consequence of development, that there is a direct correlation between urbanisation and socio-economic progress. (Paul Bairoch 1993)

After history, economy is the second explanatory factor of the urbanisation processes. If the two countries had the same per capita income in 1987, the figure has quadrupled in 20 years in China and doubled in India. At present the purchasing power per capita in China is therefore approximately twice that of India. The Chinese take-off has been much faster than India's, particularly thanks to the dynamism of its cities linked to an enormous investment in infrastructure and reforms. Chinese exports represented 10 times Indian exports during the last few years, but the relative gap will diminish in the coming years because of India's more liberal *laissez-faire* federal Government and political decentralisation after the passing of the 74th amendment to the Constitution in 1992. However, it is clear that India needs to drastically increase its investments in infrastructure. Monetary or income poverty diminishes regularly in the two countries, but the poverty of living conditions, which has decreased in China, persists in most Indian cities. This "housing poverty" is visible in the larger urbanized areas in India. Social inequities are also striking in India, specifically between unregistered migrant workers and the official urban population. The launch in 2005 of the National Urban Renewal Mission aimed at reducing poverty in Indian cities and was supported by federal budget and the active role played by NGOs in poor neighbourhoods. Regional levels of government and the transfer of financial competences have been essential in view of the immense size of the territory, and India is implementing international recommendations on the incremental upgrading of slum conditions with the participation of communities themselves, although there is an evolution towards high-cost speculative housing and the production of social housing by public agencies has not increased.

Asian cities appear to have in common the abolition of the centre-suburb dichotomy, which constitutes a feature of both European cities (which have a rich centre) and American cities (where the wealthy live in suburbs). In India, urban populations are relocating to suburban areas and satellite towns linked to the main city through commuter networks. This phenomenon is particularly prevalent in large Indian cities where ring towns or "bedroom communities" have formed around cities like New Delhi and Mumbai. Urban growth patterns in China, on the other hand, have tended to produce "city regions" along the eastern coastal belt, which are responsible for much of the economic growth experienced by the country in recent years. With some exceptions (e.g. Bangalore), Indian cities are becoming more and more multi-centred, due to investor strategies to promote metropolitan regions or urban corridors associating cities, towns and rural areas and favouring intraregional synergies. Acute regional disparities, insufficient energetic resources and huge environmental problems (air and water pollution, obsolete heavy industries) constitute major constraints and threats. In 2002 the Central Pollution Control board coordinated a project to make eco-friendly the towns of Vrindavan, Tirupati, Puri, Ujjain, Kottayam and Thanjavour. These initiatives fit well within a population that contemplates adherence to Western modes of consumption – private car, fast food, malls, modernist architecture- with an unhidden national pride and a longing for more traditional lifestyles.

3. Western mindscapes

In recent years, it is significant the number of urban studies that have focused on the cultural ideas of a community since practical outcomes of this analysis further the

understanding of urban dynamics such as 1) how the relationship between urban scenery may affect people's sense of belonging; 2) how after urban change civic memory may still retain remembrances representative of the community; 3) how the dynamics of change whether environmental, technological, or cultural should ensure social justice and sustainable communities; and 4) how urban issues may affect conflict resolution between individual and communal demands such as mobility, equity, etc. Urban sociologists such as Bridge and Watson; LeGates and Staut; Palen; Keunen and Eeckhout have turned their attention to the artistic representations in order to understand social problems and develop normative theories and ameliorative plans to counter them.

The space of the city is conceptualized as a dwelling place drawn against its inhabitants and site of relational constructions where the limit or border becomes a constitutive feature, perceived as embodied, physical and territorial, a feature of individual, but also of collective identity: me and the others. The production of spatial finitude and delimitation of both space and time places the individual in the centre of perception. Existing things are felt (seen, heard, etc.) as fixed around us, placed against a particular point of reference. This is how the constructed space acquires a sense of territorial belonging. It is through this sense of belonging that the role of history, memory and art comes into play.

Prototypical representations, frequent in advertising and marketing, often construct the city from a range of places, architectural, spatial, social, or cultural images, elected as best to simplify and evoke a prototype easy to remember (i.e. New York the city that never sleeps). Artistic representations, on the other hand, are rooted in people's emotional experiences and seek to map the multiplicity of city life and the diversity of places and spaces, both individual and communal. In the West, work by Seixo; Weiss-Sussex and Bianchini have contributed to the study of city images transported through memory, imagination and cultural representation in different media. Rob Shields, Lewis Mumford, Françoise Choay, Henri Lefebvre, Paolo Sica and Richard Sennett discussed the use of artistic and literary sources to document urbanization processes.

The 18th-century novel was the point of departure for Morroe Berger's, Oscar Handlin's or Pierre Ansay's studies on urban growth and industrialization (the same can be found in and René Schoonbrodt's volumes). Andrew Lees's volume includes both literature and journalism in the configuration of European and North American city spaces. Other studies include work by Michael Jaye and Ann C. Watts, Arturo Almandoz, or by Richard Lehan, who argues that transformations in the structure and function of cities influenced the form of the novel so that the various narrative methods and trends can be linked to historical stages of urbanization. J. Hillis Miller has proposed that every narrative without exception, even the most abstract one, "traces out in its course an arrangement of places, dwellings, and rooms joined by paths and roads" (10) Thus, streets, squares, arcades, buildings, etc. -- can be interpreted as visible signs of social, economic and political processes, conceptualizing the city as a composite of representational human acts (see also Spiridon; Verheyen; Relph). Recent research shows how that these representations of urban spaces are changing from the evocation of the physical structures of the city --monuments, public buildings, cultural attractions, to signs and meanings shared across the online communities of cyberspace. A clear symptom of the questioning of the communicative space of the city is the emphasis on meta-cognitive articulations of the awareness of limits and their symbolic representations. A certain desire to transgress limits or to articulate 'in-between' and 'third spaces' emerges as

symptom of structural problems at the spatial-temporal interface of culture and its representations, and it points to the principle of semiotic practice which allows inter-subjective formations of signification and meaningful action, negotiated in political, social, economic and technological practice (see López-Varela and Net 2009)

The utopia of an ideal *Ur-image* as a perfectly organized communal space is an enduring theme in the oral and written tradition of all cultures, standing at the crossroads between imagination and experience and forming part of the creation myths in many cultures. For example, sources for the biblical Garden of Eden can be found in earlier Canaanite and Mesopotamian myths accounted for in the *Enûma Eliš*, and in the Iranian and Zoroastrian traditions. In the Western tradition ancient works such as Plato's *Republic*, Saint Augustine's *City of God*, Virgil's *Aeneid*, Moore's *Utopia*, Dante's *Purgatory*, Bacon's *New Atlantis*, or Campanella's *City of the Sun*, include "loci amoeni" of perfect societies, myths that widely circulated between Asia and Europe thanks to travels and conquests of Alexander the Great (356- 323 BC). The idealization of rural communities in the West, has been particularly prevalent at times of fast industrial growth, and accompanying fear of the loss of the individual in mass humanity as well as ecological threats and environmental issues. The theme has frequently appeared in association to issues of femininity as a kind of essence, home, place of shelter and mother earth figure, exemplified in the Greek myth of Gaia. Works by English poets, such as Wordsworth or Keats emphasized the need to recover the appreciation for the bond between natural resources and human habitation. In contrast to this idyllic garden community, cities have frequently been associated with vice, with the earliest references in the West being the biblical mention of Cain as the first city-builder and the fall of Babylon. Dystopic representations of cities prevailed during the Enlightenment in the work of satirists such as Jonathan Swift's *Gulliver's Travels*, but more importantly in the romantic and Victorian imagination. Gothic literature disclosed a criticism of science and technology associated with enclosed and dark places (castles, corrupt cities). Corruption in cities is a theme frequently found in Charles Dickens, Cowper or Thackeray, and even more prevalent in the some early 20th-century representations such as T.S. Eliot's *The Wasteland*, Wells's *The Invisible Man* and *The War of the Worlds*, or Huxley's *Brave New World*. In Chaplin's movies, such as *Modern Times* or, more recently, in Margaret Atwood's novels, the city is again the place where technological advance, works alongside totalitarian regimes and dehumanized capitalist trends to suffocate the alienated individual in the mechanized metropolis. Selfish individual desires and the power of money lead to desolate urban wastelands, and the increasing diversity of the crowd seems to engulf differences into the mass, as Eduard Munch exemplified in 1893 in his famous painting *The Scream*. Modernist representations and their emphasis on the spatial and temporal relativity (the subjective versions of time that we can find in authors and artists as different as Bergson, Proust, Woolf, Joyce, Magritte, or Dali) indicate a desire to encapsulate time into space (Woolf's "moments of being", Joyce's notion of "epiphany"; for more information see López-Varela 2004). In many of these works, the metaphor of the journey or voyage, a symbol for movement, openness, freedom and progress becomes an endless cyclic and insecure urban wandering, almost trapping the individual. Y.F. Tuan writes that this open space, with "no trodden paths and signposts ... has no fixed pattern of established human meanings ... Enclosed and humanized space is place" (54). Why should space become place in modern representations? In the West, interwar existential place becomes *Dasein*, a situation in discourse, a place of paralysis where the individual seeks an impossible fixed identity,

possibly associated to the fact that many of these artists were in exile during and in between world wars.

Acknowledging the significance of national context in literary texts, Richard Lehan describes how responses to the modern city varied across space. While feudalism, imperialism, and totalitarianism informed European urban literature, American authors, artists, and architects reacted to and in turn shaped images of the frontier, the transition from rural to urban and with the perceived democracy of the frontier (167). Lehan introduces the category of region into his analysis, noting differences between depictions of the city in the North-Eastern, Southern, Mid-Western, and Western U.S. In late nineteenth- and twentieth-century representations cities are given the role of signs in the economy of consumption. Protagonists in US-American novels are the ethnically marked inhabitants of growing cities, belonging to a class-spectrum ranging from the destitute to the lower middle-class. This is the case in many naturalist literary portraits of cities, such as those by Dreiser's *Sister Carrie* and texts works by writers such as Ellen Glasgow, Jack London, Steven Crane, or Frank Norris, many of them committed to socialist ideals in the United States, influenced also by European writers such as Zola. The hard-boiled detective novel, which originated in Los Angeles in the 1930s, displays the image of the perverse city in the detective stories of Raymond Chandler and James Ellroy (further examples include such as the technocratic depiction of Los Angeles in which computers, cyborgs, and technology have gained control over society in Neal Stephenson's cyberpunk novel *Snow Crash* and in films such as *Strange Days* or *Blade Runner*).

Modern representations of urban communities as cities of things and cities of signs derive from industrial capitalism and post-industrial capitalism. The dominance of commodity fetishism is apparent in works by Warhol and in pop art in general, where objects and things are given a defining role in determining meaning. The next step is the city of signs, where post-industrial media culture replaces "things" for "signs". As Deleuze and Guattari explain "from the moment we place desire on the side of acquisition, we make desire an idealistic (dialectical, nihilistic) conception, which causes us to look upon it as primarily a lack ... a lack of the real object" (25) Thus, consumer capitalism mobilizes desire to produce active subjectivities rather than the passive ones portrayed in Baudelaire's *flâneur*. The spectacle of the city is a cause of discontent because it offers more experience than humans can assimilate, Restless dissatisfaction and aimless desire ensues.

Malcolm Bradbury writes that the fascination with the city has much to do with its growing size and heterogeneity: "not simply a national capital, but a cosmopolitan city ... the capital of an empire and the centre of world trade." (179). Modernist Western perceptions of the city are modular in that they displace undesirable social elements to the periphery or the regions that Michel Foucault termed heterotopoi: the madhouse, the prison, the "red light" districts, the bowery (24). The modularity of city life appears also in early motion pictures, such as Chaplin's *Modern Times* or *Naked City* and in the criss-cross of train tracks, subway lines and continuous movement of the masses in Lang's movie *Metropolis* or John Dos Passos' novel *Manhattan Transfer*. "A fragmented and subjective kaleidoscope, constantly shifting in time" (Pike xiii) the modernist city opens up spaces, inviting audiences to familiar places that are simultaneously archetypal and strange, like "a second poetic geography" that comes "on top of the geography of the literal" (de Certeau, "Walking in the City" 159), "punched and torn open by ellipses, drifts and leaks of meaning" (160).

As the modern approaches the post-modern the construction of spatiality takes a different approach breaking the order/topos-chaos/chora dichotomy. The concept of site (as in website) becomes nomadic and there is a return to bounded-chaos approaches since excessive order is perceived as oppressive. With the introduction of digital media and the widespread use of social networks, relational space is reduced in terms of physical distance but also in terms of physical contact. The post-industrial city offers alienated visions of humanity amid the overload of informational signs, exemplified powerfully in Thomas Pynchon's novels and in Paul Auster's short narrative *City of Glass* (see López-Varela 2012)

4. Eastern mindscapes: India

Regarded by many historians as the oldest living civilization of earth, the Indian tradition dates back to 8000 BC, and has a continuous recorded history since the time of the *Vedas*, believed variously to be 3,000 to over 5,500 years ago. India is racially, culturally, linguistically, ethnically and religiously the most diverse country in the world. Its culture has been shaped by its geography, different demographies, and a long history of diverse settlements, invasions and cultures. Social and cultural restrictions are still defined by thousands of endogamous hereditary groups, often termed castes. This variety has determined communal differences which in their long co-existence have enabled the proximity of many cultural and religious views, mainly Hinduism (practiced by 80% of the people) and Buddhism. The two main language families in India are Indo-Aryan (a branch of Indo-European) and Dravidian.

In South-Asia, traditions that inform religions such as Hinduism and its variants (Brahmism, Vaishnavism, Jainism, Shaivism, Shaktism), Buddhism, Sikhism, and in the East-Asian Taoism and Shinto, retain a cyclic view of time where the sacred lies outside the flux of the material world. Like Platonic and NeoPlatonic explanations, death is associated with freedom and escape from the bondage of the temporal human condition. Unlike Western ideas of Paradise, in these traditions Nirvāṇa is a state of transcendence involving a subjective experience of deep release and happiness, the result of a natural re-ordering of the mind and body via yogic discipline. In Jainism, the Kalpa Sūtra text, describes the crescent shaped Siddhashila, a place where all siddhas (liberated souls who have discarded their mortal body) reside after Nirvāṇa. In Hindu theology, Siddhashrama is a secret land deep in the Himalayas, where great siddhas live. Siddhashrama is referred in many Indian epics, including the Rāmāyaṇa and the Mahābhārata (aprox. 400 BC) the oldest preserved and well-known epics of India.

In the *Vedas*, the earliest Indian texts dating back to the late 2nd millennium BC and describing ancient Hindu cosmology, the universe goes through repeated cycles of creation, destruction and rebirth, with each cycle lasting 4,320,000 years. The Markandeya Purana one of the major eighteen Mahapuranas, a genre of Hindu religious texts, describes Hindu Paradise as seven concentric heavenly worlds and seven oceans. Jambudvīpa forms the innermost concentric island, narrow in the south and north and elevated and broad in the middle. Its name is said to derive from a Jambu tree (blackberry) and at the center of the elevated region lies the golden Mount Meru with the vast city of Lord Brahma, Brahmāpuri on its summit. Its river, Akash Ganga, issues forth from the foot of Lord Vishnu and, after encircling the city, splits into four mighty streams that flow in opposite directions, North, South, East, West irrigating all the lands of Jambudvīpa. The righteous (devas) live in this paradise while awaiting their next reincarnation.

This description shows that in South-Asian traditions, Paradise is not contemplated as a fixed location at the end of a historical journey towards sanctification, but rather as a series of existential planes, traditionally envisioned as a vertical continuum in the shape of a mountain, with heavens existing above the realm of world living creatures. This visualization is directly related to the differences religious conceptions of resurrection and reincarnation, and impacts directly in the visualization of Paradise as ideal community.

Garden-cities may have originated as early as 4000 BC, when the idea of Paradise spread through Persian literature and Hellenic influence into Europe and North Africa. The Persian word for walled-garden *eparidaida* rendered the European "Paradise". Hebrew *pardes* referred to a park, garden or orchard (see the Song of Solomon 4:13, Ecclesiastes 2:5 and Nehemiah 2:8) In the *New Testament* the word is used in Luke 23:43, 2 Cor.12:4 and Rev.2:7 in a reference to the Gen.2:8 and the tree of life. Besides, the story locates the garden with reference to four rivers (Pishon, Gihon, Tigris, Euphrates) and, as in the Indian tradition, they charted the four different directions North, South, East and West. The garden-myth contemplates location in relation to the birth of sexuality (*locus amoenus*), and therefore community. The enclosed quality of the garden was meant to protect physical and spiritual relaxation, and eventually came to refer to a plantation or cultivated area, not necessarily walled. Gardens were decorated with fountains and ponds and four streams dividing the four areas of the world. The design changed into a central pool with a long axis and a cross axis extending water channels into four gardens, a pattern visible in the garden of the Alhambra in Granada, Spain and in the Taj Mahal. The first Persian garden in India seems to be the work of Zahir ad-Din Muhammad (1483 -1530), a descendant of Genghis Khan, who was the first Mughal Emperor to invade South Asia. He established Aram Bāgh garden in Agra. In the Islamic tradition, the descriptions of paradise are mentioned in significant detail in the *Qur'an* (610-632 CE)

The different views of Paradise between ancient South Asian and Mesopotamian traditions are related to the distinct conceptions of temporal flow. In both traditions the universe is infinite, but the three Abrahamic religions, Judaism, Christianity and Islam, postulate a difference between sacred and profane time, with human creation (Genesis) as starting point. South Asian religions, however, belief that time is infinite, like the human soul, and it follows cycles. Contemporary scientific explanations see time as a dimension of space, in that future events are already there. The simultaneous experience of time cannot be captured from a human perspective. Thus, humans contemplate time as a succession of moments (past, present, future) in relation to perception and memory. The contents of an observation are time-extended but the conceptual observer, being a geometric point at the origin of the light cone, is not (see López-Varela 2004). In religious mythical imagery, a cosmic center or *axis mundi* would help connect the two planes, the sacred (Heaven) and the human world. A frequent element in all cosmologies is the tree or a pillar (ziggurat, temple, etc.) joining the two worlds.

These foundational stories are closely related to the development of communities, cities and nations. Generally, human control implies the removal of the uncontrolled, dangerous and wild, and sometimes the taming of nature. However, the envisioned garden-community also seeks to preserve ecological relations and not degrade human life and nature with polluting and unhealthy habits for the community (among them heavy industrialization, prostitution, etc., frequently associated with urban spaces). The mythical images captured in artistic

representations bring forth important human concerns regarding social life in what Benedict Anderson termed 'imagined communities'.

The balance between the imagined and the real was the object of Edward Said's critique of orientalism. The perception of space (a territory) and time (its history) is constantly created and re-created in cultural representations (images, texts, discourses). Frequently, these prototypical representations are instruments of institutional power and provide a means to control and subordinate some areas. Power often lies, and even more today in the age of media communication, in the hands of those who have the means to objectify those who they imagine. Said's notion of "imagined geographies" shows the inequalities created in the construction of representations about other (different) regions and societies.

Western imagination has tended to contemplate India as a nation of small rural communities identified with nature, and whose artistic geography has been put in relation to the abundant mythology, ancient history and spirituality that strongly infuse all levels of India's life and art. But today, Indian diversity comes across in the iconography of its everyday communal life, rendered in the cities in the form billboards and posters in the streets, automobiles and shops, exhibited in art galleries and discovered in bazaars, TV ads and film posters. In the last two decades, India has become one of the fastest urbanizing countries in the world. Yet, it has not given up its historical past and social structures. This rapid process of urbanization often leads to variable levels of spatial, social and economic marginalization in the case of the poorer sections of urban populations. This is mostly due to uneven coverage by public and private enterprise, uneven distribution of investment, and frequently the absence of social safety networks. In the history of the West, the liberalization of the economy associated to industrialism generated an increase in social differences that eventually led to discontent and revolutions. These problems have not been solved yet. In a working paper for the US National Bureau of Economic Research entitled "The divergence of human capital levels across cities", Christopher R. Berry and Edward L. Glaeser (2005) present a model showing the relationship between the clustering of skilled people in metropolitan US areas, and urban size, measured as population. These findings account for roughly 25 to 35 percent of the total increase in economic inequality across cities over the past three decades in the US. The solution lies in developing strategies to turn low-wage unskilled jobs into higher-waged skilled positions and build a more robust social safety net to address the persistent problems of the disadvantaged. State measures to facilitate education and training to the poor are fundamental. The last part of this paper turns to artistic representations that illustrate some of the concerns, fractures and tensions created by rapid changes in technology, industrialization and urbanization, and that frequently confront the imaginaries of local communities.

5. West Bengal and the *UttarAdhunik* school of poetry

The rapid growth of population in India, with 26 cities expected to host over 1 million inhabitants by 2030 is sometimes contemplated as a source of hope for the suffocating Western economies that expect to see an increase of commerce with the two Asian emerging superpowers, India and China. In the last ten years urban population in India has reached 30 percent of its total population. Many changes to the cities are coming from long-time residents, who are becoming more prosperous and invest in new industrial goals. After

independence, several new cities were built and older cities such as Varanasi or Hyderabad, grew into state capitals. Other urban centres under colonial rule, like Kolkata, favoured bourgeois cosmopolitan environments that linked European commerce to South Asian regions. Mumbai, Delhi and Bangalore are becoming the world's largest megalopolises and cultural centres of growing significance, with Bollywood, Bhangra Beat and Asian Dub increasingly playing a formative role in global pop culture. All these spaces reflect the complex interrelationships between globalization, local traditions and redesigned living spaces.

As in other developing countries, India's modern popular imagery has resulted from the major cultural and technological shifts during 19th and 20th-centuries. Mass production of images, new means of visualising myths and religious legends have produced a huge eclecticism of images. The copy-paste world of Internet virtual images facilitates an ambivalent collage of representations that equates with the global appropriation of aesthetic and cultural content at a transnational level. Today's image economies are, more than ever, economies of mobile World Wide Web signs (López-Varela 2012). But although the city may be an ideal place to translate cultural forms into artistic practices, the contemporary art production is no longer just located in the urban centres. Utopian imaginaries coexist with dystopic representations where the disentanglement of communal bonds and the fear of losing one's sense of belonging take the form of fractured and polluted urban environments. With the proliferation of online technologies and social networks, this theme is being avidly discussed all over the world, as digital media is creating a general dislocation, not just of information, but also of issues concerning individual and collaborative production, creative commons and copyright, and opening up the spectrum of communal life in general.

In West Bengal, a group of popular poets have been discussing about what they describe as an "overpersonal (*Uttar-Vyakti*) moment" of total personal individual growth, but simultaneously deeply social. The group, which Amitabha Gupta called *UttarAdhunik School of Poetry (Janapad 1985)*, has vowed to put the socio-cultural context at the very centre of their poetry and react against the individualism of modernity and post-modernity, and the market-guided reality prevalent in India since the 1960s and 1970s. *UttarAdhunikata* looks back at Indian mythology and folklore, ballads and music, drawings and paintings to bring in a plurality which combines individual's idiolect and sociolect, and contemplates authorship as a group and inter-genre activity. As in the *Siddhaachaaryas* and *Vhaisnava Mahajans*, in work by *Shakta* poets, in *Kalighat* or *Birbhaum* drawings and many terracotta panels in temples, the hybrid integration of artistic units in a series of compositions is frequent, and these works were frequently the result of the participation of several generations of artists.

A continuation of the breach between Western and Eastern space-time conceptions, Indian art shows the fluid diasporic nature of location, authorship, representation and genre. One example can be found in the differences between Greek and Indian myths regarding the origin of music. In both cases, female deities personify sound patterns, but while the Indian classification refers to time-sequences (Raaga Puurabii, for example, is about the evening, and Raaga Bhiaron about dawn), bridging the sacred and the profane and integrating female and male incarnations (Raagini and Raagas), the Greek cannon uses female goddesses (all daughters of Zeus) who differ in the themes they present (Clio, for example, is the music of

historical songs; Terpsichore, of songs on dawn, etc.). The concept of Vaak (the voice the word it utters) is relevant here and refers to the activity of speech as a cohesive force which unites sounds and words. Similarly, "UttarAdhunikata is a "textual integer", an expression coined by Amitava Gupta, to explain the textuality that interrelates poems connected into a narrative that fuses past and present, individual and communal and collective consciousness.

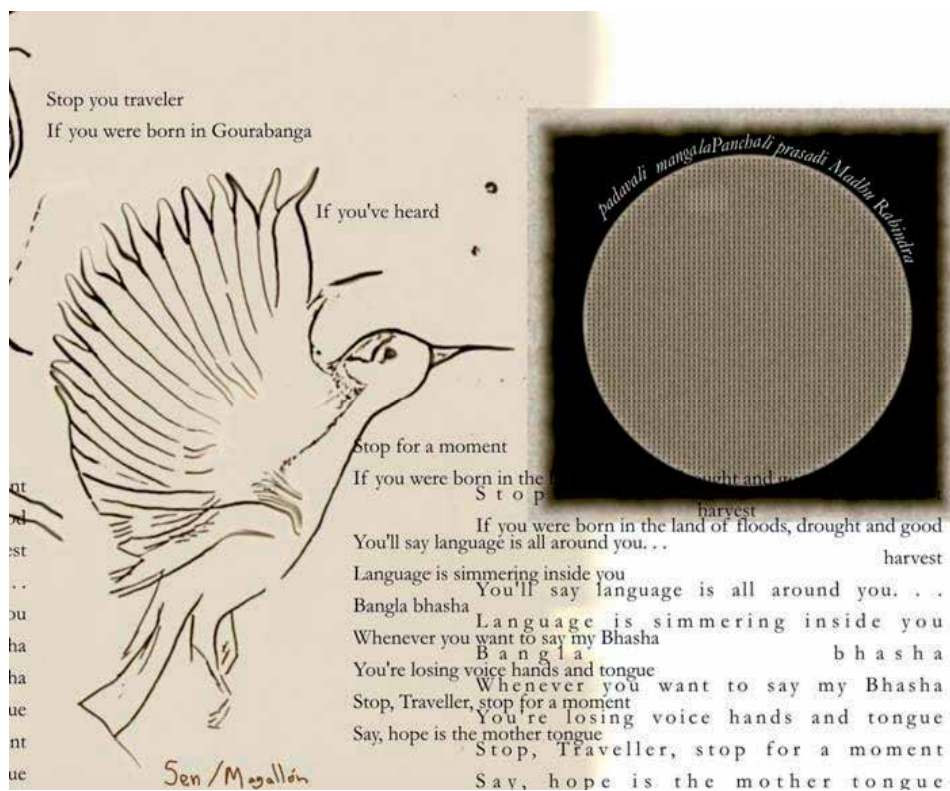
Sen explains that *UttarAdhunik* is not a movement but rather a stirring, a musical tone, an emotion, a puzzle or perhaps an anxiety. Quoting Niharranjan Ray (1968), Sen describes the notion of social subjectivity represented by the Indian concepts of 'Kula' and 'Sila'. A person is introduced to his/her social world in terms of his/her *KulaSila*. "Kula is heredity, inheritance, which is both biological and cultural, together constituting what we call tradition." (Ray 1968: 6) *Kula* takes place in a particular context and human situation and carries "particular problems, obligations and challenges" In these encounters the person develops ideas, visions, images, symbols, and modes and methods of thought and action, becoming aware of this inheritance (*Kula*), and responding and articulating these modes in particular ways, thus determining his or her *Sila*. (Ray 1968: 7) Myth is not a passing reference in *UttarAdhunik* poetry. In order to bridge the gap between *Kula* and *Sila*, between the past and the present, the *UttarAdhunik* poets use traditional myths as part of present history. Teleological (linear) time and history are understood as objective (scientific/empirical) response to the conflicts presented in myth (Hegel's dialogical approach is based on a synthesis of opposites, something unthinkable for Indian conceptions of coexistence of multiplicity).

Any theory is inevitably bound within the periphery of country, time and word – even the basic physical characteristics of the theory-giver leave their imprint on the nature of the theory. Everybody lives in a specific country and time, and expresses his mind through words – the thoughts and attitudes of his countrymen are always there in his conscious and unconscious self. Tradition is created in this way. This tradition can also be called a cage. But in the cage itself lies the possibility of an achin pakhi (unknown bird) that transcends the cage. (Chakrabarty 62)

The well-known poem "Darao Pathik" (Stop you traveller), written by Anjan Sen, addresses some of the issues just discussed:

Stop you traveller
 If you were born in Gourabanga
 If you've heard padavali mangala
 Panchali prasadi Madhu Rabindra
 Stop for a moment
 If you were born in the land of floods, drought and good harvest
 You'll say language is all around you. . .
 Language is simmering inside you
 Bangla bhasha
 Whenever you want to say my Bhasha
 You're losing voice hands and tongue
 Stop, Traveller, stop for a moment
 Say, hope is the mother tongue

(translated from Bengaly by Khandakar Ashraf Hossain)



The poem's keywords, "born in Gourabanga...the land of floods, drought and good harvest", with "language all around you", "simmering inside you", refer to the inherited past, carried by the traveller in his/her movement. The poetic subject asks the traveller to "stop for a moment" and recover his/her "voice hands and tongue". The poem/song ends with the line "say, hope in the mother tongue", emphasizing that Indian myths and traditions (mother tongues) are a source of hope and freedom for *UttarAdhunik* poets. The illustration of the poem also refers to this fact by depicting a bird of heavy plumage flying into the sky.

Sen's poem also refers to the "travelling across" (time and space) of certain elements in Bangladeshi poetry. Sen's essay "Ashir Kabita, Grihey Pherey Bhramonik Chokh" which appeared in *Ekobingsho* (March 1992) graphically showed the similarities between the writings of poets on both sides of the border:

What a striking unity between Lalon Fakir and Ramprasad Sen. Although as poets they belong to two different religious and social classes. Actually what makes them attractive is their love of man which is not to be found in modern poetry. Similarly, there are affinities between the poetic languages of Shah Muhammad Sagir, Chandidas and the padavali poetry, though their subjects are different. Sufi-Sahajia literature also is a great treasure of Bangla literature: in it there has been a synthesis of various religions." (Sen in Chakrabarty 1991: 10)

Many of Anjan Sen's poems focus on spatial dynamics, rather than on cartographic representations. The journey and migratory movements are a constant theme, and the echo of nostalgia for lost traditional roots resounds in many of the verses.

Flowers bloom in the footsteps of one who goes
 Pulling away all attractions and burdens
 And while going, sweat stains the chosen path.
 Flowers bloom, the journey becomes meaningful.
 A flurry in the path of speech
 Oblique attractions
 Started, one hesitates
 And goes again
 And in going words become fire and water
 Earth and universe.
 Speech continues
 And the earthly rhythms of common speech
 Become verses
 Going.

("Journey" translated from Bengali by Amlan Dsgupta; Illustrated by Diana Magallón 1989)



The philosophy of *UttarAdhunikata* does not see distinct cultures as mapped and detached realities, but rather as a system of inter-relations in continuum influx. Unlike the nostalgic modernist use of myth to capture the past in the present moment, West Bengal poetry understands temporal happenings as eternal recurrences, in line with traditional Indian conceptions of the universe. Time is a continuous wave of states of being which include past, present and future simultaneously. The individual moment is contemplated in relation to eternity or timelessness. And since the 'reality' of time is always set against the background of space, timeless time can only be thought within spaceless space, that is, infinity. Both eternity (the temporal dimension) and infinity (the spatial dimension) of humanity are, according to ancient Indian traditions, in perpetual flux or change.

One of the striking characteristics of Anjan Sen's poetry is its simplicity. It comes across despite the intertextual references to classic Indian myths, history and folk traditions. Besides, Sen has actively encouraged the conversion of his words into visual art, crossing the border between text and image, and employing different formats, not just illustrations but also digital art forms (employed for instance by the Mexican artist Diana Magallón) and base-relief (as seen in his poem "Imagination" illustrated by sculptor Bimal Kundu, below). Furthermore, although Sen himself has illustrated many of his poems, he has also invited artists from diverse cultures to put images to his words. This is a direct way of involving his audiences into co-creation, making his own work more open, public, and intersubjective and less private and individual.

Anjan Sen is also happy to find the reflection of the tolerant coexistence of multiplicity of world views and religious symbols and tropes in his own poetry and in the poetry of the young Bangladeshi poets. In his critical works, Sen has explained that "In the literature of every language there are some elements which are the properties of its own. This is seen in that a particular image, subject or idea or context comes back again and again in that literature. Perhaps it changes its external form in the hands of different poets, but it does not become another text or influence. It manifests itself in intertextuality" (Sen: 1991, p. 36-37) References such as *anno* (food) and *dhan* (paddy) are reminiscent of folk life. They are found, for instance, in an old spell about *dhenki* (a wooden pedal used in husking rice). These metaphors bring back the awareness of the native soil.

So many seeds grew into plants
 So much gold was reaped
 The farmer's daughters walk round the heaps of paddy
 Making the shrill 'uloo' sound
 The festival continues all morning
 The dream of more *anno*
 After that dry soil again
 No seed no water

("Krishir" [Of agriculture], translated from Bengaly by Khandakar Ashraf Hossain)

Similarly, "The Hunger" expresses the need for a return to the mythical and the traditional; the need to stay hungry, to dominate the capitalist desire to consume until everything is exhausted, including creativity. Again, the simple visuality of the poem is easily accessible to the reader:

Tell me - who will you eat, and eat how much
 That 'll make you fat as a grampus
 Fire in the large hearth does not quench
 Melts glass molten iron
 Crops get burnt out
 Even that will you lap up
 Devour sweetness and its joy ?
 Life becomes a listless corpse as it corrodes
 You 'll eat corpse cadaver - you 'll eat all
 And will grow into a pile in the capital market
 Killing the deceased over and over again

My hunger lies in his hidden tongue
 Tell me how much more will you eat
 How much more that' ll make you immense

("Hunger"; Translated from Bengali by Udaya Narayana Singh)

"Sharavan" is also about creativity; Here Anjan Sen uses metaphors of harvest and fertility. During the month of Sravan, a large section of Indian people perform a ritual in which they carry water on their shoulders and travel for around 50 Km to pour this water on god Shiva, the Indian god of fertility and harvest. Sen suggests that grain hardens and becomes a stone (ShivaLinga is the symbol of fertility, a black stone in the shape of a phallus).

In *The Myth of the Eternal Return*, Mircea Eliade explains how many of these ancient agricultural and fertility rituals may have travelled from their original contexts, translated and interpreted in new cultures. Rituals around the world have many resemblances, possibly not just due to the fact of mutual influence, but also owing to the basic structures needed to maintain human life in Neolithic times. Grain is a source of food and energy and a symbol of new life and creativity (i.e. holy bread in Christian Communion) Water is a source of cleanliness and new life (i.e. Baptism) and helps grain to grow properly on the land, just as food helps human physical and spiritual growth. Echoes of these rituals can also be found in the Egyptian *Book of the Dead* and in ancient Celtic fertility rituals (see *The Golden Bough* by Sir James Frazer, and Jessie L. Weston's *From Ritual to Romance*, both sources of T.S. Eliot's *The Wasteland*). These myths are related to a cyclic conception of time in which the ritual is used again and again at the end of the cycle in order to clean, and prepare the land for a new start (also in a metaphoric sense where the land stands for the physical and spiritual human body). As Eliade explains, the cyclic ritualistic (*illo tempore*) conception of time (still welcomed in contemporary societies every "New Year") provides a sense of relief against the linear flux that ends in death. In most religions, after the "apocalyptic" moment of the end of physical time (life) there would be a possibility of return (reincarnation or resurrection).



The sky shivers with the swing of rains
 the rain drip-dripdrenching the visionary world
 O grace . O thunderous grace, quench the cosmic thirst
 In the rice field , the festival song is on
 In the roots the swing of the rains
 Towards their rock the pilgrims move
 their shoulders heavy with the sacrosanct water
 Pouring water - Sravan takes a shower
 once again the song of desire for grain
 the rock has been washed by many monsoons



ভাষা
 বীড়াও পক্ষিক
 যদি রেমার কন্ড হয় এই পৌত্বসে
 যদি তুমি তুমি খায়ে পানবলী সঙ্গল
 পাখানী প্রসঙ্গী মলু রঙ্গিত
 তিসেক নীড়াও
 বনা সুফলা বরা বেশে রেমার কন্ড যদি হয়
 তুমি বলাকে ভাষা আমার তুমিক
 তবু
 রেমার কাঁচেরে বরা হও
 যেহেতু তুমি বলাকে পার না ভাষা আমার
 আমারে বলাকে লও
 তুমি বলাকে পার না তবু
 রেমার ময়ে আটপে উঠে ভাষা
 বলা ভাষা
 যখনই তুমি বলাকে মাঝে ভাষা আমার
 তুমি হরিবে ফেলব কই বাহ ফিত
 বীড়াও পক্ষিক নীড়াও তিসেক
 বলা আশাই তো মাতৃভাষা।

The sky shivers with the swing of rains
 the rain drip-dripdrenching the visionary world
 O grace . O thunderous grace, quench the cosmic thirst
 In the rice field, the festival song is on
 In the roots, the swing of the rains
 Towards their rock the pilgrims move

their shoulders heavy with the sacrosanct water
 Pouring water - Sravan takes a shower
 Once again the song of desire for grain
 The rock has been washed by many monsoons.

("Sravan", translated from Bengali by Amlan Das Gupta; Illustrated by Diana Magallón, Mexico)

Krishnanjan Bhattacharya indicates that *UttarAdhunikata* recognizes cultural continuity and does not see distinct cultures 'detached realities', but rather as a system of inter-relations in continuum influx. (Bhattacharya 2004:184). The dynamic conception of *UttarAdhunikata*, unlike the nostalgic modernist use of myth to capture the past in the present moment, understands temporal happenings as eternal recurrences; a continuous wave of states of being which include past, present and future simultaneously (see Nikan 1967, Gupta 1991, Nundy 1992). Therefore, the question of seizing a moment of recollection as if suspended in time, present in Wordsworth's romantic poetry, in Joyce's notion of 'epiphanies' or in Virginia Woolf's 'moments of being' does not arise in *UttarAdhunikata*.

A post-post-modern conception (if labels were still in vogue) would be closer to what Anjan Sen has in mind: the inter-relatedness, dynamic and rhythmic, song-like flow of time and life, and of the substances of which life is made, both material (Sen's uses the mythical basic symbolism of earth, water, air/sky) and psychological (an emphasis on the affective and the aesthetic). The feelings that such a vision enables are captured in the metaphor of flowing and cleansing waters in Anjan Sen's poems below, and in the illustrations that accompany the poems:

And flows goes on
 Standing rock- deep in the holy river, the hibiscus sky
 Where hast thou come O river
 The flowing locks of the destroyer, in mountains
 When the fire of the skies cool, water
 Drenches the soil and soothes the eyes
 Life flows on through the rain,
 And men discuss it as hope
 And sing its praises
 Call the river their mother,
 Sing hymns
 In their primal, magical belief
 Sky rain mountain river water
 Flowing

("Flow" 1989; Translated from Bengali by Amlan Das Gupta)

UttarAdhunika seeks to consider social accounts (both mythical and historical), alongside individual perceptions within the aesthetic. What this means is, in fact, an attempt to question the traditional division between myth, history and poetry, and formulate a kind of inter-generic hybrid position.

History, as formulated by Aristotle in his *Poetics*, has always been associated with chronological narratives of political events, frequently wars and the establishment of new



Fig. 1. Ganga -painting in mixed media by Ganesh Pyne // pen & ink drawing by Ganesh Pyne

communities and nations. As such, it has been considered a 'serious' discipline, not to be associated with fictional narratives or myth. Research on narratology (i.e. Dorrit Cohn and Käte Hamburger) has signalled this separation as unfounded, based on the distinction between fact and event and on the separation of the narrative voice from its authorial origin in order to follow the empirical need of objectivity. The essential difference between historical writing, myth and fiction, is the claims of the first to be a truthful account, the record of fact. Fictional writing, on the other hand, is characterized by a built-in license to create an individual personal world, including the right to flaunt that license. The desire to break the borders of history (official collective memory), myth and poetic fiction (personal memories) is, therefore, related to the understanding of life as inter-subjective flux where the social and personal, objective and subjective, real and imaginary, factual and fictional, merge.

Another criterion for distinction between historiography and fictional texts is the overall configuration of the time sequence of events. Historical narratives are generally chronological and forward-looking, moving from cause to effect (teleology). In fictional narratives the characters' recollection and memory may preserve only some of the reported order. A retrospective de-chronologizing memory based narrative moves from effect to cause and the characters might eventually disclosed in opposition to the reader's previous assumptions. However, the fracture of time-sequences might also occur in non-fictional genres such as autobiography, which is predicated on a necessary forgetting or distancing to achieve objectivity.

While potentially a source for remembrance, the material traces of the past might be structured by omissions, restrictions, repressions, and exclusions that incite, even as they thwart, total recall. As such, they expose the ever present system of inter-relations inherent in processes of selection, assemblage and ordering whereby events are made into facts, and also into symbols. The fact is that which is affirmed (statement) of the event, and events need to be described so as to appear as facts. Thus, we can say that an event is a fact subject to description that is, telling. Fictionalization is involved in this process, since it can be considered the provision of a description that transforms an event in a possible object of analysis, that is, a fact.

Hayden White's classic *Metahistory* works on the idea of "emplotment", a literary re-writing of events interwoven in figurative speech where the play between selection, organization of events, tropes and figures of speech problematize the borders between fact and fiction. White observes the tendency towards event dissolution as basic temporal occurrence in modernist narrative. (67)

Historian and literary critic, Dominick LaCapra has also questioned the borderland between historical discourse and fiction in an attempt to unveil the so-called "historicist phallacy" that alludes to the impossibility of explaining historical texts simply as contextual. In *History and Criticism* (1985), LaCapra considers two levels, intra-textual and extra-textual and questions if the opposition between fact and fiction is a polarity that excludes or, if on the contrary, both exist in a continuum of complex mutual interrelations.

Michel De Certeau (1988) proposed to examine the role of fiction and the unconscious in the production of a historical text. According to him, the notion of "anecdote" is fundamental because it allows for the creation of a gap in the narrative continuity of a larger story (grand narrative vs. petite histoire) and allows the irruption of chance events and discursive contingencies, bringing forth a break in temporal flux, a point of retrospection. For De Certeau, history can only be understood as a "lieux de mémoires", a social space that translates de exercise of memorializing in monuments to remember the past, a position close to that of Jacques Derrida in *Archive Fever*, where he points out the "presentness of the past", using it to project into the future.

The above suggestions problematize the differences between "fact" and "event", and between the re-workings of individual memory and the sociological symbolization process implied in the valuation of events in order a story into history. In 1946, Robin George Collingwood had also attempted to establish a separation between an inside and an outside of history. For him, the outside of a historical event consisted on the placement and movement of bodies in a given historical moment that happened in the past. The inside component was made of the thoughts of historical agents who relate historical events imaginatively, motivated by conscious thought processes that can be re-thought. However, Collingwood left out unconscious motivations, such as emotions and passions, signalling a cognitive human mind all made up of pure rationality (for the importance of the unconscious in autobiography, see Eakin 1985: 9; see also H. Porter Abbott and James Clifford 1987 for the importance of individual recollection in social memory and culture) Meir Sternberg has noted that inference-making relies on objective knowledge as much as in anticipation, prediction and other affective and interpersonal qualities, and explains that Aristotle's theory of catharsis builds emotions into a poetics of impact, chiefly regulated by affects (mimesis arises from pity and fear). Sternberg adds that the distinction between fiction and non-fiction is the result of this particular attention to impact (comic, tragic, comic, persuasive, illusionist, sublime, etc.)

To summarize the above discussion, one can argue that historical reality is comprised of a multitude of varied life experiences (events) which need to be negotiated into common experience (facts), both at the psychological personal and sociological levels. Events take the symbolic form of values that can be applicable to other times and other context, carrying more than one level of meaning. Values and morals are not simply thoughts and ways of

reasoning; they are experiences. The root of values lies in the way experiences have a profound emotional impact on us, as if they were aesthetic experiences. Thus, it makes sense to explore the symbolic forms that represent values because the repetition of symbolic forms affects psychic and non-explicit levels giving way to their interiorization, both in personal and sociological terms. It is also possible to defend that fictionalization and myth are essential to the creation of the transitional realm that renders the representation of affective life experience in terms of generic hybridism, as the *UttarAdhunikta* proposes.

In his poem “Imagination”, Anjan Sen uses the Indian concept of *Kalpa*, which refers to the endless fulfilment of desire related to the mythical cycle of creation and destruction. The poem points intertextually to Meghaduta-Kalidasa's Sanskrit epic in its desire to establish an inter-relationship between myths, history and poetry. *Kalpadruma* or *kalpa*-tree roots the future firmly into the past, but the dynamism of the circular time is achieved in the poem through various metaphors that emphasize floating up and down (“a grey cloud floated down”) and falling (“dust kept falling”; “diamond coals ...falling”), the oscillation of bright (“diamonds”) and dark (“coal”, evening, etc.), and transformation (cutting wood, “the eyelid flickered”; “one bird...become Bihag”). Bihag is an Indian evening melody.

From the Kalpa began imagination
 From the leaves of the Meghduta , a grey cloud
 Floated down in front of us.
 The Kalpadruma shuddered
 Gold Silver dust kept falling
 Diamonds coals mud kept falling
 The eyelid flickered
 One bird is flying become Bihag
 A woodcutter was gathering wood from Kalpadruma

(“Imagination”; Translated from Bengali by Amlan Das Gupta)

Research on the psychological aspects that encourage creativity started with Sigmund Freud's *Mourning & Melancholia* (1917), developed in the context of his personal experience in mourning the death of his father in 1896. Two years before, Freud had also written about the traumatic experiences of the World War in *Thoughts for the Times on War & Death*. His study *On Narcissism* was published in 1914, where he develops further the relationship between mourning and melancholia as long-term outcomes of trauma, “even if the patient is aware of the loss that has given rise to his melancholia.” (1917: 254) Dominick LaCapra introduced a distinction in the notions of absence and loss. The first involves the perception of something that was never present to begin with. Loss refers to a particular thing/person/event, but “when loss is converted into (or encrypted in an indiscriminately generalized rhetoric of absence, one faces the impasse of endless melancholy, impossible mourning” (LaCapra “Trauma, Absence, Loss” 1999: 698). Characteristic features of trauma are the secrecy and the silence surrounding it, symptomatic of an event whose core meaning has been permanently displaced--not known directly. Trauma can only enunciate itself as an enigma until such event can be brought back into consciousness through the act of speech, in which a listener or audience needs to be necessarily involved (psychoanalytic therapy or creative writing/art). Geoffrey Hartman also describes this feature of the symptom as the



কল্পনা

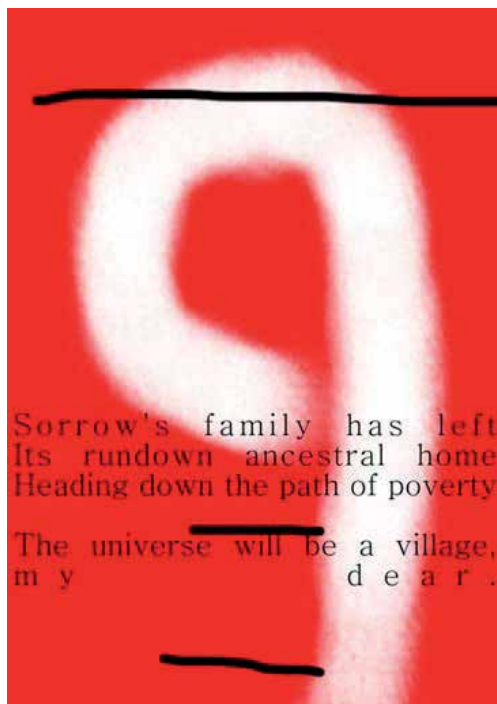
কল্প থেকে শুরু হয়ে গেল কল্পনা
 মেঘদূতের পাতা থেকে খুব ধূসর একটা মেঘ
 ভেসে গেল সামনে দিয়ে
 কেঁপে উঠল চোখের পাতা
 নড়ে উঠল কল্পদ্রুম
 পড়তে লাগল সোনা বুপো ধুলো
 পড়তে লাগল হীরে কয়লা কাদা
 কেঁপে উঠল চোখের পাতা
 বিহঙ্গ এক উড়তে উড়তে বেহাগ হয়ে গেল

 একজন কাঠুরে কল্পদ্রুমের কাঠ কাটাছিল

Fig. 2. Kalpana (imagination) -relief work by sculptor Bimal Kundu

kind of perpetual search of a memory that "is inscribed with a force proportional to the mediations punctured or evaded." (537) Lacan had argued that this void can itself be reduced to a kind of object which appears when the imaginary order ceases to fill up the concrete holes in signifying chains with illusions of wholeness. In this fragmented telling, which reappears in a stark encounter with anxiety, the memory of "fact" reappears as narrated "event", where conscious and unconscious, (objective) reality and its interpretation (or subjective fiction) meet (according to Lacan, the symbolic is structured as fiction, with traumas producing holes, gaps, voids and enigmas in the narration of recollected events).

Some of Anjan Sen's poems capture this quality of postcolonial trauma. In many, the combination of myth, history and folklore is felt as a kind of nostalgic encounter, an attempt to fill the void of a postcolonial experience of loss. "Sorrow" captures this sense of trauma, both in its words (translated by Jesse Knutson) and in Diana Magallón's illustration



This short poem is about the sadness of migration. Because of globalization, many fertile agricultural lands in India are being taken over by state and industrialists as Special Economic Zones (SEZ). Farmers are not getting enough compensation and they are forced to abandon their houses and their previous lives and head into poverty. Asked by Anjan Sen to comment on “Sorrow”, I imagined the white cloud as a kind of letter, a walking stick or a kind of inverted path. Its ghostly quality contrasted strongly with the colour red, frequently associated with blood and passion in many cultures. The two black lines that cut across unevenly conveyed the idea of fragmentation, but also three-dimensionality, just as the black typography of the text. The irony in word “dear” and the mention of McLuhan’s famous reference to the world as “Global Village” took on multiple meanings.

In a dialogue with Sen, paradoxically enabled by the virtual environment of the World Wide Web social networks, he advised me to revise the mythical roots of the sound of the cloud and *Meghnad* in relation to the *Ramayana*. The idea of sending hidden messages in the form of a cloud made me return to the idea of loss and trauma. It would be interesting to explore to what extent the generic hybridism present in Anjan Sen’s poems stage the crossings between rational and irrational experiences, both personal and social. It would be interesting to explore how the trauma of the postcolonial opens up in this dialogue of Sen and his illustrators and critics. In my unstable position of a reader/listener who tries to understand, a critic who tries to speak/write, and a semiotician who tries to discover, I encountered Sen. His desire to be both author and object of interpretation struck me. I see him as attempting to cross not just the limits of author/critic relationships, but also the boundaries of inter-texts, and of intermedial forms of representation. The dialogue between Sen and I, between Sen and his illustrators, readers and critics, seems to be pregnant with a desire to cut-across intersubjective positions and intercultural differences. A dialogue that

has stretched beyond the borders of a well-known social network and onto these pages, cutting across the artificial divisions between social sciences and humanities, across East and West differences and commonalities, across nostalgia and dreams, helping unveil the shared Ur-topias and community relations of the 21st-century.

6. Acknowledgments

Anjan Sen is National Tagore Scholar, poet and artist, his works seek a return to the dialogue with others and with nature. Collections of poems in Bengali:

Kathabarta (conversation) 1974

PaathBharatbarsha (reading India) with illustration of Ganesh Pyne ,1981

Tin Bisswe Din Rattri (Days and Nights Over Three worlds) 1988

Goud Bochon (The Gaur Speech) 1989

GoudBochonKothonBisswo (The Gaud Speech)

Bhando Bevando (From earthen pot to universe) 2002

Ghor Bahir (The room the outside) 2007

Chobir Kobita (Poems of the pictorial) 2010

For a complete list of his poetic works, essays, and links to webpages see:

<http://www.ucm.es/info/siim/35.php>

<http://www.ucm.es/info/siim/descargas/AnjanSenBriefCV.pdf>

Khandokar Ashraf Hossain (Prof. of English at Dhaka University) is one of the leading literary figures in Bangladesh. He has translated many of Anjan Sen's poems. For more information see

http://en.wikipedia.org/wiki/Khondakar_Ashraf_Hossain

Amlan Das Gupta (Prof of English at Jadapur University, Kolkatta) is a noted scholar of Classical and Biblical Studies, English Renaissance literature and an authority on Miltonic studies in India

http://en.wikipedia.org/wiki/Amlan_Das_Gupta

Udaya Narayayana Sing (Pro-Vice Chancellor, Viswa Bharati University, Linguist, poet, critic) A major linguist, translator, lexicographer & creative writer who has translated many of Anjan Sen's poems. For more information see

http://www.visva-bharati.ac.in/at_a_glance/unscv.pdf

Edited collections of essays in Bengali Jointly with Anjan Sen:

KobitaarBhaashaa (The Language of Poetry) 1987, 2nd edition 2012

UponyaaserSahityatatwa (The Poetics of Novel) 1989, 2nd edition 2010

Myth ,Sahitya o Samaskriti , (Myth literature and Culture) 1990 2nd edition in press

Eurokendrikata o SilpoSamaskriti (Eurocentrism and Art, Culture) 1992

BaanglaarUttaraadhunikSaahityachinta (The Urraradhunik literary Ideas of Bengal) 2004

Ganesh Pyne has illustrated some of Anjan Sen's poems. Pyne is known for his small tempera paintings, rich in imagery and symbols. He is one of India's foremost contemporary

painters today. He acknowledges the influence of great painters like Abanindranath Tagore, Hals Rembrandt and Paul Klee. For more information

http://en.wikipedia.org/wiki/Ganesh_Pyne

Bimal Kundu is a sculptor who has illustrated some of Anjan Sen's poems. His profile can be found at

http://societyofcontemporaryartists.com/artists_details.php?id=16

<http://www.aakritiartgallery.com/artist.php?id=348>

Diana Magallón is an experimental artist, author of visual poetry books: "Del oiseau et del ogre", "Largos cabellos flotantes", "Pheromones", "Oxygenation" and "Phellipe in wolf" For more info

<http://cipollinaaaaa.blogspot.com>

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Social Science as a Complex and Pluri-Disciplinary System: Economics as Example

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1. Introduction

Epistemic pluralism, including such perspectives as neuroscience, is a promising strategy for transforming the language games of social science – for putting any and all social sciences in what Wilson (1998) calls consilience. In other words, this paper addresses social science as a complex and pluri-disciplinary system. Epistemic refers to knowing, and pluralism can refer to a minimal strategy of more than one way. Rather than a minimal strategy, the paper recommends epistemic pluralism as a grand strategy that will be explained for individual social sciences as referring to a multiplicity of perspectives.

I sympathize with those who want a massive restructuring of the social sciences. I applaud attempts in the United States of the National Science Foundation to work toward what was conceptualized as the lost unity (to the extent that it ever existed) of the social sciences. These National Science Foundation attempts, and earlier in the 1920s attempts by agencies like the Social Science Research Council, were largely unsuccessful. Sometimes they were counterproductive in increasing the number of social sciences, e.g., adding trans-disciplines. A major problem for a complete restructuring for the social sciences is that complete victory is unlikely: the fragmented organizational status quo is often even more inhibiting than the substantive. I don't think it is adequate to seek such broadening of the language game of social science primarily *organizationally* – seeking salvation through either a massive or a less massive top-down structure of disciplinary reform. I do see a grand strategy of epistemic pluralism as a feasible opportunity to avoid the organizational solution. If that leads eventually to re-restructuring (as it may), that is fine. But meantime, a more attractive aim (helped by the catalytic power of neuroscience) is shorter term – major language game tweaking, with powerful programmatic results.

“the frontiers of the individual sciences... are incessantly shifting and... there is no point in trying to define them either by subject or by method. This applies particularly to economics, which is not a science in the sense in which acoustics is one, but rather an aggregation of ill-coordinated and overlapping fields of research in the same sense as is medicine” (Joseph Schumpeter, 1954, p. 10)

Epistemic pluralism – a grand strategy including neuroscience – is open to all the social sciences and to the social sciences as a whole, and this paper parallels what I have written

elsewhere on these and related topics in terms of “social science” subjects like public administration and governance (e.g., Farmer, 2010; 2011, and 2012). A distinctive feature of this article is that the example is economics.

Why select Economics as an example? One good reason might be Schumpeter’s comment about economics (quoted above): he held that in science the “process of specialization has never gone on according to any rational plan – whether explicitly preconceived or only objectively present – so that science as a whole has never attained a logically consistent architecture: it is a tropical forest, not a building erected accordingly to a blueprint” (Schumpeter, 1954, p. 10). On the one hand, exceptionalist claims have been made for Economics, such as that it is unique among the social sciences in being rigorous. If it is the case that Economics is the Queen of the Social Sciences, it seems interesting to consider a subject that considers itself in that way. On the other hand, we can note that some, especially in Europe, are experiencing economics as being at a crossroads, e.g., Rosser, Holt & Colander, 2001.

This paper contains four sections. First, it discusses the relevance of Ludwig Wittgenstein’s description of a language game, with illustrations from economics. Second, it describes epistemic pluralism, referring to an example outside economics. Third, it sketches neuroscience and its relevance to economics in terms of neuroeconomics. Fourth, it analyzes the relevance of epistemic pluralism, using economics as an example for all social sciences and for social science as a whole.

2. Language games

Epistemic pluralism can be directed in the shorter run at upgrading the language game of any social science, and this can be illustrated in terms of economics. No less than any other subject, Economics has its set of language games. Some such language games are within the mainstream and some are at the circumference of the discipline. Toward the mainstream, for instance, it has been suggested that there is a difference (a difference between language games, in fact) in the United States on macro economics between “two great factions: saltwater economists (mainly in coastal U.S. universities), who have a more or less Keynesian vision of what recessions are all about; and ‘freshwater’ economists (mainly at inland schools), who consider that vision nonsense” (Krugman, 2009, p. 40): and we will return later to this saltwater v. freshwater example. Toward the circumference, there are alternative schools of thoughts, including those described by Prychitko (2003) and those like behavioral economics and neuroeconomics.

Wittgenstein emphasized the nature and the relevance of a language game. For him, the nature of language is essentially public and social; it is not a private matter. It is created and sustained interpersonally by a language community, and we participate in a variety of language games. Wittgenstein illustrates a primitive language by talking about a builder and his assistant; the words and the action constitute the game, as the builder calls out the words like block, pillar and slab, and the assistant brings the respective stone. Language is an activity or a form of life, a game.

On the relevance of language games, there is Wittgenstein’s claim that “the limits of my language mean the limits of my world” (Wittgenstein, 1958, p. 11). Wittgenstein’s meaning (although often described) can be illustrated for economics in terms of contrasting metrics used, contrasting ideologies, and contrasting views of rationality.

For the first (the metrics used), listen to the argument that the President of France Nicolas Sarkozy uses in his preface to "Mis-measuring our lives: Why GDP doesn't add up" (Stiglitz, Sen & Fitoussi, 2010). "I hold a firm belief: We will not change our behavior unless we change the ways we measure our economic performance... A tremendous revolution awaits us - we can all feel it. This revolution is inconceivable without deeply challenging the way we represent the consequences of what we undertake, the results of what we do... " (Sakozy, 2010, p. vii). The Commission that the President of France set up makes clear that its principal emphasis is choice of statistics (i.e. choice of elements of its language), rather than particular policies. But it does suggest that it would shape public policy for the better if society were to adopt a different metric for measuring our economic lives. The Commission recognizes what has been widely noted in the literature, and that is the limits of the Gross Domestic Product metric. Twelve recommendations advocate a new or substitute metric, replacing the current GDP. The Commission starts with better measures of economic performance in a complex society, e.g., when evaluating material well-being, looking at income and consumption rather than production. It also holds that well-being is multidimensional, and that objective and subjective dimensions of well-being are both important. One of its recommendations, for instance, is that quality of life indicators in all the dimensions (e.g. including people's health, education, personal activities and environmental conditions) should assess inequalities in a comprehensive way. The Commission notes that "what we measure shapes what we collectively strive to pursue - and what we pursue determines what we measure - the report and its implementation may have significant impact on the way in which our societies look to themselves and, therefore, on the way in which policies are designed, implemented and assessed" (Stiglitz, Sen & Fitoussi, 2010, p. 6). The way that my "economic" language (or any other of my language games) is limited will in turn limit my recognition of the "economic" or related world. Some would add that in this manner the social sciences are socially constructed, and their construction in turn shapes what they know about their worlds.

For the second example, Wittgenstein's view of language limits may be illustrated in terms of two varieties of ideology (leaving aside other varieties) that return as promised to the saltwater economists v. freshwater economists, noted above. The saltwater conceptualize the market as requiring macro management and the freshwater conceptualize the market in terms of neoliberalism. The first set of language users will readily see what they would characterize as a "necessity" of macro market management that John Maynard Keynes first advocated in his 1936 *General Theory of Employment, Interest and Money*, e.g., the desirability of government financial stimulation in time of recession. The second set of language users will have embraced neoliberalism, what is called the Washington consensus that started in 1979. Market fundamentalism maintains that, when markets are left alone, they will solve all economic problems. The market fundamentalists believe that the market gives better information than individual humans can obtain for themselves. So Nobel Laureate Paul Krugman (2009, p. 41) can write of the latter that "the belief in efficient financial markets blinded many if not most economists to the emergence of the biggest financial bubble in history." Milton Friedman could give a contrary instance of blindness.

For the third example, consider the contrasting views of rationality at the heart of mainstream economics. Shaun Hargreaves Heap, for instance, describes three different senses of economic rationality and their explanations and prescriptions. These three are the

instrumental (which he describes as the sense that is typical in mainstream economics), the procedural and the expressive. Under the instrumental rationality assumption, the individual person acts so as to satisfy his preferences best. Such rationality “is located in the means-ends framework as the choice of the most efficient means for the achievement of given ends” (Heap, 1989, p. 6). The procedural version portrays the individual as a rule follower, and such behavior is procedurally rational. Herbert Simon and his “satisficing” principle would be an example. By expressive, Heap takes rationality to be concerned with ends pursued rather than with the actions taken in pursuit of them” (Heap, 1989, p. 6). By contrast, there are “alternative” economics (like Behavioral Economics, noted earlier) that do not make the same assumptions about rational economic man.

The aim of epistemic pluralism is to tweak our language games. The argument here is that what is needed is a grand strategy, utilizing a multiplicity of perspectives. Let’s explain.

3. Epistemic pluralism: A grand strategy

Recall that “epistemic” is taken from the name of a branch of philosophy, and it indicates *knowing* as in such questions as “How do I know?” or “What is the difference between knowledge and opinion?” Recall also that “pluralism” can refer to both shades of a “minimal” or a “grand” strategy. A minimal strategy can be described as marginally “more than one way.” A grand strategy, rather than a minimal strategy, refers to a multiplicity of perspectives, and this multiplicity includes other social sciences without being at all limited to social sciences. A grand strategy of Epistemic Pluralism is what is being advocated here. Minimal epistemic pluralism is not uncommon in most social sciences, more in some than in others. A grand strategy would be a rare bird.

For an example of a minimal strategy, consider the long relationship between economics and mathematics (a non-social science). There has been a growing mathematization of economics. A contrast can be drawn between the economic world that Alfred Marshall was able to comprehend and the world of upgraded mathematization within contemporary economic theory. Weintraub explains that mathematics for 19th century economics honors students was defined as “a set of trick and details, based on Newton, which were linked to applied physics and mechanics, and which could be tested in a time-limited fashion” (Weintraub, 2002, p. 14), and the great economist Alfred Marshall later gave the advice “Burn the mathematics.” At the present time, “economists, methodologists, and historians of economics have debated the impact and significance of the substantial racheting upward of standards of mathematical sophistication within the profession” (Weintraub, 2002, p. 261). Many economists (not all economists) hold that power is gained for Economics from the rigor and the abstraction.

On a minimal strategy, it is true that inter-disciplinary relationships have developed “in” economics – and in other social sciences. “Over the years a number of new and exciting sub-disciplines have evolved, in which economists and colleagues from other fields jointly explore common ground. This is clearly visible in the names (and contents) of well-respected journals like *Economics and Philosophy*, *Journal of Law and Economics*, *American Journal and Sociology*, not to mention the many journals covering the domain where economics, mathematics and statistics overlap” (Erreygers, 2001, p. 2).

Let us re-explain. Mainstream social sciences and economics have each yielded some valuable results without utilizing any other perspectives except their own. Again, economics and other social sciences have used one or a minimal number of different perspectives. These individual perspectives have also produced enriching results. Yet, by itself and in isolation, a solitary way of looking can be misleading. Similarly, a minimal strategy of using perspectives can give only parts of puzzles, parts of the road map. A grand strategy, rather than a minimal strategy, of epistemic pluralism can yield a quantum gain in understandings. There is no wish to claim that a minimal strategy is never to be preferred.

How many lenses are best for a grand strategy? In an ideal world such as might exist on Mount Olympus, my supposition is that all lenses are best. However, in the world of theory and practice, selection is inevitable, and I would err toward robust perspectives. As I have mentioned before (e.g., Farmer, 2010), the optimal number of perspectives to analyze *X* depends on such factors as purpose, the nature of *X*, and the importance of *X*. Arnold Modell considers that studying the biology of meaning requires a strategy “that includes the philosophy of language, linguistics, cognitive science, neurobiology, and psychoanalysis” (Modell, 2003, p. 1). Some may wish to include not only disciplines and schools of thought but also artistic practices, e.g., for what they can contribute to exploration of emotional, affective and emphatic cognition (e.g., see Lopez-Varela, 2010). E.O. Wilson (1998) offers the grandest of grand strategies when writing about consilience and the unity of knowledge (uniting the sciences, and ultimately with the humanities).

The preference in my own study of Public Administration was to use eleven perspectives (Farmer, 2010). These perspectives were Public Administration from a traditional perspective, from a business, from an economic, from a political, from a critical theory, from a post-structural, from a psychoanalytic, from a neuroscience, from a feminist, from an ethical, and from a data perspective. And clearly there are many more candidate perspectives. The selected perspectives were used to identify insights about five Public Administration elements that were used as vehicles, as it were, for examining implications for Public Administration theory and practice. The five vehicles were the different kinds of planning, the different kinds of management, the meaning and relevance of what underlies public administration (e.g. the social construction of relevant societal beliefs and attitudes), the scope of public administration, and the extent of imaginative creativity in public administration.

Of the selected perspectives, here are only three examples of these perspectives and illustrations of insights suggested to Public Administration. First, the business perspective could tell Public Administration about the relevance of supply chain management (SCM). Second, the political perspective could lead to insights for Public Administration about how lobbying and money warp the administration of policy and co-shape policies, e.g., buying contracts and jobs. Third, the post-structural (or postmodern) could inform Public Administration more fully how the hyperreal accentuates fear. The hyperreal refers to items or events that, rather than being merely real or unreal, are perceived as more real than real.

4. Neuroscience and its relevance

The twelfth informal annual conference of the Society for Neuroeconomics was held in Evanston, Illinois, in, Sept-Oct, 2011. It was entitled *Neuroscience: Decision Making and the Brain*. It described itself as aiming “to promote interdisciplinary collaborations and

discussions on topics lying at the intersection of the brain and decision sciences in the hopes of advancing theory and research in decision making. To this end, we welcome involvement by all researchers interested in these and related topics, including reward, learning, emotion, and social behavior to name but a few” (www.neuroeconomics.org/conference, October 12, 2011). Neuroeconomics is on the circumference of economics: mainstream economics does not include neuroscience. Also, neuroeconomics by itself constitutes an example of a minimal strategy of epistemic pluralism.

The minimal strategy aims of neuroeconomics are bi-directional between two disciplines. A first direction aims to study what economics can offer neuroscience, via (say) mathematical economics. Paul Glimcher gives the example of probability theory for explaining the relationship between behavior and brain. He notes that “mathematical theories of decision making that include probability theory must form the core of future approaches to understanding the relationship between behavior and brain, because understanding the relationship between behavior and brain is fundamentally about understanding decision making” (Glimcher, 2003, pp. 177-178). The second direction aims to study what neuroscience can give to economics, including items friendly to the economics paradigm.

This bi-directionality should be analyzed. On the one hand, bi-directionality between two disciplines is not essential. In the neuroeconomics example given here, rightly or wrongly it might strike many non-economists as odd that economics (rather than mathematics) might offer to help neuroscience with its mathematics; it might seem less odd if the help came from mathematics. But a response would be that economics is concerned with decision making and that it is heavily invested in incorporating mathematics. On the other hand, bi-directionality between disciplines need not be equal. Like economic man, the choice between this or that direction (and the strength of the opposing directions) should be made by discipline X on the basis of the benefits accruing to discipline X. But a consideration is that neuroscience is a prestige science with which to partner, bringing benefits to the partnering discipline – and this points to the catalytic power of neuroscience in tweaking the language game of social science.

Neuroscience may well be the dominant science of the twenty-first century, and it should be recognized that it is producing game-changing results. It has been suggested that neuroscience can act as a catalyst in seeking the re-unification of the fragmented social sciences and social action subjects (e.g., Farmer, 2007, pp. 74-89).

Let us repeat what neuroscience is, and re-stress what it does not entail that otherwise would repel social science disciplines like economics. On the first part, neuroscience is the variety of specialties that study the brain – the central and the peripheral nervous systems – and the relationships of these organs to such activities as choosing, judging, behaving, remembering, thinking, deciding and feeling. This seems a large part of what is involved in social sciences, including economics. In neuroscience, many levels of study are utilized, e.g., including the molecular, cellular, systems, behavioral and cognitive.

On the second part (what neuroscience does not entail that otherwise might repel social science disciplines like economics), it is important to recognize neuro-plasticity. The brain is biological; but it is more than that. The functioning of the brain is shaped and re-shaped by social, political, psychological, economic, and other factors. The biology of the brain is shaped by its experience. Neuro-plasticity refers to the brain’s capability, through re-wiring of the brain, of adapting. The brain is shaped and re-shaped by its experiences.

Among the social sciences and other disciplines, neuroeconomics is not unique in seeking an association with neuroscience. See Farmer (2007, pp. 77-80), for example, for an account at that time of the neuro-political, neuro-philosophical, and the neuro-psychological – as well as the neuro-economical. That section began by indicating that the impact on the social sciences by neuroscience should be “read in the context of the neuroscientific revolution symbolized during the Decade of the Brain (1990-1999) and the development of the Human Genome Project (1990-2003).” It also pointed to a critical question. That question is “whether the interest aims to preserve the disciplinary status quo or to achieve fresh and possibly counter-disciplinary conclusions. On the one hand, the interest of the neuro-economists may be in gaining support... This is not in terms of cooking the books, but rather of setting the research questions and agenda in a way that is friendlier or more open to the status quo. On the other hand, the interest of neuro-economists may be in following wherever the research leads, even if it clashes with the dominant paradigm” (Farmer, 2007, p. 77). This remains a critical question not only for economics but for all the social sciences.

The literature on how neuroscience can be helpful to social sciences is extensive. Richard Restak is among these in the literature. He has written that “our understanding of the human brain will revolutionize how we think of ourselves and our interactions with other people” (Restak, 2006, p.1). The subtitle of his book is “How the Emerging Neurosociety is changing how we live, work and love.” He lists how brain-based developments provide new societal capabilities, e.g., tests that reveal our private thoughts and tendencies, chemical enhancers to stimulate wants, and so on. Others are those like Antonio Damasio (2003) and R.L. Farmer (2009). The former book is entitled “Looking for Spinoza: Joy, Sorrow, and the Feeling Brain.” The latter book is entitled “Neuroscience and Social Work: The Missing Link.”

5. Relevance of epistemic pluralism to economics

As a beginning step, one way that the relevance and utility of a grand strategy can be explored is through an exercise (with two subsequent exercises) that plays with discovering possible insights for economics from consideration of a number of other perspectives. The notion of “discovering” is used deliberately, and the reader is asked to recall the difference in Philosophy of Science between discovery and justification. In any strictly scientific endeavor, there are no rules for discovering untested hypotheses. Archimedes can be sitting in his bath, and he can suddenly be struck by the idea that there might a connection between the volume of his body under the water and the displacement of a volume of water. It does not matter from the point of view of rigor what prompted his imagination – eureka – to think of that possible connection. It might have been A, B, C or D. The question of “justifying” possible insights is a different matter, with different aspirations for rigorous requirements.

Rigor is a matter of great importance for contemporary economics. Let’s turn to this, before turning to the recommended three exercises that appear at first sight (but not when examined rigorously) to be contrary to rigor. Edward Lazear is quoted (in Erreygers, 2001, p. 1) as explaining that the “power of economics lies in its rigor. Economics is scientific; it follows the scientific method of stating a formal refutable theory, testing the theory, and revising the theory based on evidence. Economics succeeds where other social sciences fail because economists are willing to abstract” (Lazear. 2000, p. 102). Asserts Lazear (2000, p.

103), the “strength of economic theory is that it is rigorous and analytic.” Here we leave aside the earlier comment about the relationship to rigor sought through mathematics.

But there is a downside to the rigor story, and to the extent that this downside is true it constitutes a rationale for at least some economists adopting a grand strategy of epistemic pluralism. Lazear (2000, p. 103) adds that “the weakness of economics is that, to be rigorous, simplifying assumptions must be made that constrain the analysis and narrow the focus of the researcher. It is for this reason that the broader-thinking sociologists, anthropologists, and perhaps psychologists may be better at identifying issues, but worse at providing answers. Our narrowness allows us to provide concrete solutions, but sometimes prevents us from thinking about the larger features of the problem.” To this Guido Erreygers adds that this view is not universally shared among economists. But he adds that a “closer look at what economists really know about society would teach them modesty both about what they have thus far achieved and about what they could possibly achieve in the future” (Erreygers, 2001, p. 2).

The adoption of a grand strategy does not imply that economics must give up the appropriate aspiration to positivism for the purpose of developing explanations. Yet appropriate use does not entail any kind of positivist fundamentalism. The strict use of positivism does not rule out all hermeneutics for developing understandings and meanings, as if Philosophy of Science did not contain these aims as differing from explanation. Yet it is curious that the distinguished economist David C. Calander should label himself an economic gadfly (in his “Confessions of an Economic Gadfly”) if it is because he opposes the Chicago (the Becker/Friedman) approach “that the market is the solution to everything” and the M.I.T approach that “reduces everything into quasi-formal models.” A line of research he supports is the art of economics, which he describes as going back to John Neville Keynes. “The art of economics involves judgment because you are adding in sociological and political variables” (Snowdon & Vane. 1999, pp. 211-212).

Here is one way how the Grand Strategy exercise could be attempted. For Exercise 1, take a sheet of paper and a pencil. Down the left side of the sheet list perspectives with which the reader is familiar – or alternatively (say) ten perspectives. The object of the exercise is to note under each perspective (each sub-heading) one or more items that economics might find relevant to economics. Unfortunately, this is not as straight forward as it is sounding if the exercise is adjusted to make it not merely the search for insights but for helpful insights. At the least, this involves much reading in the literature of each selected perspective. Also, after Exercise 1 is completed, two others remain. Exercise 2 is to synthesize what has been learnt for economics as a whole, using the insights for further reflection. (I would not rule out testing the more interesting possible insights or hypotheses that might emerge.) Exercise 3 is to contemplate (to reflect on) the synthesized conclusions one at a time.

Exercise 1

Let’s make a list of ten perspectives in the form of sub-headings, and then enter elementary questions that might yield insights on economics. I am working on the assumption that an extraordinarily imaginative thinker could ask much better questions and achieve better insights. Some of the perspectives used here are disciplines (like History, Anthropology, Business, Political Science, Psychoanalysis, Neuroscience, Philosophy, and New Rhetoric) , and others are “schools” of thought (like Critical Theory and Post-structuralism). Clearly,

others are left out; but this does not mean that they are either less important or should have been left out. For instance, I leave it to the reader to include feminism, law, sociology, mathematics, and game theory. But enough is included to make the point about the discovery power of a grand strategy of multidisciplinary epistemic pluralism for economics.

HISTORY (a): Would history be among the perspectives capable of adding to a fuller and more useful classification of types of capitalism? Some historians have indicated that it is difficult to find any period that has no market, no capitalism. In his *The Idea of Capitalism before the Industrial Revolution*, for instance, Richard Grassby writes that the “main problem with the idea that capitalism emerged at a particular historical moment is that it is hard to find a pre-capitalist economy... Market capitalism appears as old as civilization and is recognizable even in primitive societies” (Grassby, 1999, p. 23).

(b) Would history be among the perspectives that could provide insights helpful in upgrading the predictive capability about future developments in the world economy? Yes, Economic History has long been studied by economists (but recall that the point here is not a minimal, but a grand, strategy), and important centers for the study of economic history include, for example, the University of Toronto. We turn to that university to Robert Heilbroner (1993), giving the 1992 Massey Lecture on 21st century capitalism. At one point, he writes that in the 1970s he “had occasion to discuss the success of economists in foreseeing large-scale events during the twenty-odd preceding years such as the advent of the multinational corporation, the rise of Japan as a major economic power... Not a single one of these world-shaking developments had been foretold.” He went to write about other world-scale happenings “such as the decline in productivity suffered by all the Western powers or the striking loss of global economic leadership of the United States” and the collapse of the Soviet Union. Referring to the great research institutions, he asserted that “The answer is that none foresaw them” (Heilbroner, 1993, pp. 19-20).

Anthropology (a): Is the money rhetoric in the United States different from that in some other countries, and, if so, could this be among the perspectives that can facilitate understandings in economics about (say) typologies and the nature of capitalisms? Ruben George Oliven is among the anthropologists who have written about the money rhetoric in the United States. “The United States is frequently depicted as a country where monetization – the increase in the proportion of all goods and service bought and sold by means of money – has taken place. Money has become a central value, and commoditization has fully extended to all spheres of life” (Oliven, p. 161).

(b) Could the one-dimensional nature of economic man be analyzed by economists with the help from perspectives that include anthropology? Oliven, for instance, writes more about the contrast of the United States with Brazil in that “U.S. Americans like to be independent” – not wanting to depend on friends. “This is why you see twelve-year old middle class children doing some sort of work to earn money... But if in the US people are usually doing things by themselves, those in Brazil are always asking for or offering help, which is a way of making friends and building networks” (Oliven, p. 119)

(c) Should Russia adopt an American or a Chinese economic system? This is a question that I was asked at Lomonosov Moscow State University in May 2011. Can an anthropological or sociological perspective participate with other lens in providing insights that can help

economic analysis of these and other policy issues in an increasingly integrated world market system(s).

Business (a): What understandings of economic theory (as it is) are elucidated by technological and business changes and aspirations?

(b) To what extent is the role in economic theory of the entrepreneur illuminated by the hierarchical status and hierarchical structure of a corporation?

Political Science (a): How is economic analysis of market fundamentalism illuminated, if at all, by theoretical discussions of concepts in political theory, e.g., by positive and negative freedom?

(b) What would understandings offered by the political science perspective contribute (with other perspectives) in deepening understanding of economic ideology? Kenneth Hoover, for instance, comments that the “partisans of the market are everywhere heard, while the partisans of government are muted and defensive. A half century ago, political discussion was quite the opposite. Then government was the wave of the future, and the evils of the market were widely advertised” (Hoover, 2003). His book examines the ideological spectrum in the twentieth century in terms of (two of them celebrated economists) John Maynard Keynes, Harold Laski and Friedrich Hayek.

(c) What is the utility of the political science perspective in providing insights for economic science in considering the relevance that market fundamentalism has for democracy? Noam Chomsky writes, for instance, that democracy requires “that people feel” a connection to their fellow citizens and that this connection “manifests itself through a variety of nonmarket organizations and institutions. A vibrant political culture” requires public schools, libraries, neighborhood groups and organizations, public meeting places and trade unions to meet and interact with fellow citizens. He claims that “Neoliberal democracy, with its notion of market uber alles, takes dead aim at this sector” (Chomsky, 1999, p. 11)

(d) To what extent can the perspective of Political Science help to elucidate what part, if any, Big Government plays in economic activity? For example, Timothy Carney claims that the “myth is widespread and deeply rooted that big business and big government are rivals – that big business wants small government” (Carney, 2006, p. 35)

Critical Theory (a): This refers to the work of the Frankfurt School of Critical Theory. To what extent does Herbert Marcuse’s one-dimensional man provide insight(s) about the limited notion of economic man? Marcuse was a philosopher and a sociologist, and his notion of one-dimensionality in thinking and acting includes a description and an assessment of uncritical and conformist acceptance of existing structures, norms and behaviors.

(b) Is there analytical utility for economics in Jurgen Habermas’ concept of the life-world? Habermas was also a philosopher and a sociologist, usually classified as a second generation member of the Frankfurt School of Critical Theory. The notion of life-world includes communicative reason and communicative action. Communicative reason “is contrasted with instrumental rationality that serves functional purposes – and that facilitates oppressive choices” (Farmer, 2010, p. 82).

Psychoanalysis (a): Does discussion of the unconscious in psychoanalysis suggest including insights about the effects of the unconscious in economic behavior? That is, might the

unconscious be incorporated more fully in economics in so far as economics is conceptualized as it was by Lionel Robbins as “the science which studies human behavior as a relationship between scarce means which have alternative uses” (Robbins, 1945, p. 24).

(b) Are there economic myths in the same way that (say) Carl Jung understood myths? Recall that Carl Jung focused on the collective unconscious which asserted that identical in all people is a common psychic substrate of a supra-personal nature.

(c) Is there an unconscious CEO’s office, or an unconscious (beyond the account of the invisible hand) functioning in the market place?

Post-structuralism (post-modernism) (a): Robert Fogel, the winner of the 1993 Nobel Prize in Economics, indicates that it is necessary “to address such postmodern concerns as the struggle for self-realization, the desire to find deeper meaning in life than the endless accumulation of consumer durables and the pursuit of pleasure” Fogel, 2000, pp. 176-177). He speaks in terms of self-realization being understood in terms of fifteen spiritual resources, e.g., like a sense of purpose, a vision of opportunity, a sense of mainstream life and work. He claims that the greatest mal-distribution in rich countries is in terms of spiritual, not material, resources. Could what Fogel calls such a “post-modern” perspective (some may wish to re-locate him to the economic history section) be among the lenses that aid economists in contributing to its analyses of economic life?

(b) How could use of deconstruction add to understanding of elements of economics like capitalism? Recall the nature of deconstruction and the fact that Robert Lucas was described as being deconstructive when characterizing involuntary unemployment as neither a fact nor a phenomenon that need be explained when talking about Keynes’ General Theory (see Samuels, 1990, p. 232). It will be recalled that deconstruction, developed by the philosopher Jacques Derrida, is described as a good reading of a text. Text is used in a wide sense to include meanings and narratives not only in documents but also implicit in situations and events. It thus includes, on some readings, economic situations, events and other phenomena. Concerning Lucas’ analysis, it is not suggested that he himself considered it “deconstructive.” But there is good reason to hold that Derrida would understand – the extent that deconstruction speaks all texts experiencing undecidability – deconstructive analysis applying both to voluntary and to involuntary unemployment.

Neuroscience The existence and work of the neuroeconomics society supports the view that neuroscience can make a contribution to economics. The previous section has also discussed the catalytic role that neuroscience promises to have on the analyses conducted in the social sciences.

(a) Can the development of neuro-societies create insights and raise analytical issues that affect economic choices and forward-looking economic analysis?

(b) Are economic beliefs (views, etc) co-shaped within the brain?

(c) Can the study in neuroscience of mirror neurons contribute to a deeper understanding of economic activity? Mirror neuron systems function when we look one another in the eyes and when we look at another’s actions. It is implicated in the copying behavior between individuals.

Philosophy (a): What light could philosophy of mathematics shed on the mathematization of economics?

(b) What could philosophy of science suggest about the positivism of economic “science,” and its association with rigor?

(c) What could philosophy of hermeneutics suggest about the character of research in Econ-Art? In his *Econ-Art: Divorcing Art from Science in Modern Economics*, Rick Szostak (1999) is among those who have discussed Econ-Art. There is much to be explored in this topic. For instance, consider Szostak’s comment that painters “are often known by their brushstrokes, composers by their innovative use of various instruments, and novelists by their vocabulary or manipulation of grammar... The econ-artist too is observed to take great pride in their mastery of the tools of mathematics” (Szostek, 1999, p. 75). On the same page, Szostek quotes John von Neumann as saying that “at a great distance from its empirical source, or after much ‘abstract’ inbreeding, a mathematical subject is in danger of degeneration.”

(d) What light can meta-ethics shed on the economic use of Pareto optimality?

New Rhetoric (a): The economist Deidre McClosky has utilized the perspective of New Rhetoric and Symbolic Interactionism to add insights to, and about, economic thinking. For instance, she has argued that the “proofs of the law of demand are mostly literary” (McClosky, 1998, p. 23) and she has used rhetorical analysis to claim that “statistical significance has ruined empirical work in economics” (1998, pp. 112-138).

“A rhetorical criticisms of economics can perhaps make economics more modest, tolerant, and self-aware, and improve one of the conversations of mankind” (Deidre McClosky)

(b) Would economists analyze differently if the focus of economic theory were on the work place, rather than on the market place? In other words, would there be significance in such a change in metaphor?

(c). Others have claimed to analyze the rhetorical reasons why there is a difference between what has been described as the cleanliness, beauty and orderliness of economic theory (e.g., see Farmer, 1995, pp. 154-167) and what Kenneth Burke describes as the “the scramble, the wrangle of the market place, the flurries and flare ups of the human barnyard, the give and take, the wavering line of pressure and counter-pressures, the logomarchy, the onus of ownership, the wars of nerves ((1969, p. 42). Burke describes New Rhetoric as leading us and economics through this condition.

Others: The reader is asked to expand and change the list, and to create a “better” and an amplified list of opportunities in the form of questions. For instance, add Feminism (or Womanism); note that interdisciplinary contributions from feminism have been achieved by some economists, and add helpful questions like “What does learning about ‘other-ing’ in feminist theory suggest about ‘other-ing’ in economic theory and practice?”

It should be re-emphasized that important perspectives and opportunities have been omitted from Exercise 1. Such omissions include (where important inter-disciplinary work has been done) not only Feminism but also in (say) Law, Mathematics and Sociology. It is correct that economists are described as crossing disciplinary boundaries in impressive numbers. In a minimal strategy of epistemic pluralist exploration, Gudeman (2009) reports that some economists have discussed unfamiliar entities like culture, figurative speech,

social and cultural capital, and even gift and reciprocity. The returns for economics are significant, even with a minimal strategy.

Exercises 2 and 3

The returns are even greater for economics (and for any social science discipline) when a grand strategy, rather than a minimal strategy, is pursued. Two further exercises are suggested. Exercise 2 synthesizes what might be gained for economics as a whole, using all of the selected perspectives. Exercise 3 contemplates about (or reflects on) each substantive conclusion or item. The exercises are left to the reader.

Exercise 2 requires synthesizing the results of each and all of the perspectives in the reader's own version of Exercise 1. Perhaps the reader may decide to synthesize these results down to, say, five or so items. If the reader decides to list five or so items from her own list derived from her version of Exercise 1, she might (or might not) list as a first item (say) Capitalism which appears in the first perspective (history) in the version of Exercise 1 given above. Capitalism also appears in each of the other nine perspectives listed. And so on.

The reader should not be disturbed about the lack of a recipe for a hermeneutic activity like synthesizing and nor should she be unaware of the complexity. Hermeneutics refers to the interpretation of a text, elucidating meaning or understanding. A text is any kind of writing or situation or action. I have explained that the "hermeneutic approach that I prefer is that developed in the wake of Gadamer, Habermas, Apel and Ricoeur, and it seeks the underlying meaning of a text by thinking of the overall story that best brings together the text's important elements" (Farmer, 2010, p. 176). My preferred approach is this hermeneutic circle "that tries various interpretations until, considering all components, the "best fit" understanding is reached about the meaning. The reader is not obligated to adopt the hermeneutic circle. But she will recognize that there are good, bad and indifferent interpretations. Complexity results in part from the synthesizer's conscious and unconscious prejudices.

Exercise 3 aims toward contemplation of each of the synthesized items. I recommend that the reader attempt this with the considerations and practices that the neuroscientist Nancy Andreasen (2005) analyses in her *The Creating Brain: The Neuroscience of Genius*. For instance, she recommends four exercises for extraordinary creativity. Only the fourth is mentioned here. "One of the best ways to get a new perspective on things – an important resource for thinking creatively – is to tackle a new field you know little or nothing about. If your college major was biology or physics, try studying poetry or painting... Churchill and Eisenhower painted... Einstein played the violin..." (Andreasen, 2005, pp. 162-163).

None of the three exercises will be as productive as they should be if the rigor of extraordinarily creative imagination is not involved.

"Game theory, however, is not everything... The reigning culture in game theory asserts the sufficiency of game theory, allowing game theorists to do social theory without regard for either the facts or the theoretical contributions of the other social sciences. Only the feudal structure of the behavioral disciplines could possibly permit the persistence of such a manifestly absurd notion in a group of intelligent and open-minded scientists" (Herbert Gintis, 2009, p. xiii-xiv)

The hesitations that some economist might experience at the prospect of a grand strategy are reflected in Gintis' remark for game theory. In different ways, they are shared by all social sciences. However, they can be overcome.

6. Epilogue

This paper has addressed social science as a complex and pluri-disciplinary system. The main example chosen for the claims in this paper have been made in terms of Economics. Yet its claims apply no less to any social science as to the whole of the social sciences.

This paper has pointed to a grand strategy for epistemic pluralism including the catalytic power of neuroscience. Rather than a minimal strategy, it recommends a grand strategy utilizing a multiplicity of disciplinary and other perspectives. It is a promising strategy for transforming the language games of social science.

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Section 3

Citizenship Participation and Sustainable Communities

Sustainability Science and Citizens Participation: Building a Science-Citizens-Policy Interface to Address Grand Societal Challenges in Europe

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1. Introduction

The recent *Europe 2020 Strategy* adopted by the European Union formulated ambitious policy objectives in areas such as climate change, energy security, demographic ageing or resource efficiency. The Europe 2020 flagship initiative *Innovation Union* called for linking future EU funding programs more closely to these objectives by putting a stronger focus on tackling societal challenges. These will be addressed, amongst other things, by launching *European Innovation Partnerships* in areas in which government intervention is clearly justified and where is deemed necessary to combine the EU, national and regional efforts in Research and Development (R&D) and demand-side policies. Examples of such partnerships areas of great concern for the European citizens: active and healthy ageing; smart and livable cities; water-efficient Europe; smart mobility for Europe's citizens and business; agriculture productivity and sustainability.

The European Innovation Partnerships (EIPs) are new avenues for doing sustainability research combining scientists, policy makers, citizens and civil society organizations, and sectoral stakeholders in a shared process. This chapter presents a method for doing participatory research and evaluation with panels of randomly selected citizens, in sustainability domains related to the grand societal challenges addressed by the Europe 2020 strategy.

The method has been designed and applied in three pilot EU funded projects of knowledge brokerage and participatory assessment, related to sustainable cities (RAISE: www.raise-eu.org), sustainable urban transport (MOVE TOGETHER: www.move-together-exhibition.net) and sustainable coastal water management (AWARE: www.aware-eu.net). Only in the latter project, however, the method has been fully tested at European and local levels, and subject to a fully-fledged evaluation activity.

The following sections will present the method and the results of the more recent and mature pilot experience – the AWARE project after which the method is named – and discuss theoretical foundations and future prospects for practical application.

2. The AWARE method and pilot applications

2.1 Methodology

Broadly speaking, the AWARE methodology engage panels of randomly selected citizens from all countries of Europe and all walks of life (*“European citizens’ juries”*) to make a critical assessment of research goals, outcomes and management options, focusing on their societal acceptance. The assessment is undertaken by means of brokerage activities among different forms of knowledge - i.e. between the different scientific disciplines needed to understand complex issues, the citizens’ everyday life (*“non expert”*) knowledge, the different stakeholders’ interests, and the way decision-makers tackle societal challenges. One of the key characteristics of the AWARE method is indeed linking together scientists and citizens early in the process in order to provide a common understanding of the issue at stake. Thus, lay citizens gain confidence to discuss the issues with other stakeholders and form independent opinions.

Bringing together scientists, citizens and decision-makers in knowledge brokerage activities – by means of structured citizens’ conference processes where citizens’ panels discuss and present their recommendations (*“Citizens’ declarations”*) to policy makers and society at large – is at the heart of the proposed approach. This is a new way of connecting citizens, experts, stakeholders and policy makers in order to:

- share a common understanding and awareness of the complexity of environmental and societal challenges;
- discuss how research and new innovative solutions may help to tackle those challenges – now and in the medium-to-long term future;
- deliberate about how various research outcomes (scientific advice, new innovative solutions etc.) could or should be taken up by governments or citizens themselves, e.g. by incorporating sustainability into planning or adopting more environmentally-friendly behaviors, respectively.

The pilot experiences conducted so far show that the method works, delivering important benefits for all the actors involved:

- the scientists learn to communicate results in a tailored manner to citizens, as well as policy makers and stakeholders. They also can broaden their research interests by accepting new inputs, and discovering a public interest in their results, beyond the academic fora;
- the citizens quickly learn key environmental concepts, change their mind becoming aware of the complexity of the challenges ahead, and reflect on how to tackle them with more systemic approaches. They may better assess which policies would be needed for solving complex problems, and choose to support their politicians in tackling challenging decisions and policies, thanks to the better understanding and greater commitment gained throughout the process;
- the various stakeholders benefit from the insights and opinions of the scientists, citizens and policy community usually assessed in the more neutral context – i.e. not heavily influenced by special interests – of *“citizens juries”*;
- the policy-makers – through meeting the citizens and hearing their proposals – can share common visions on societal challenges that could not be solved with simple

policies, would require systemic and long lasting actions to be implemented beyond electoral terms, and a deeper consensus and commitment of all actors involved. Policy makers also gain further confirmation that decisions successfully involving all actors affected, through increased awareness for instance, are more effective in their implementation and outcomes.

The specific issue addressed in the AWARE project was the deterioration of coastal waters in Europe, and how EU funded research and EU and local policies may help to reduce deterioration and achieve a good ecological status of waters by 2020. This environmental goal is a core objective of the EU Water Framework Directive (European Commission, 2000). This piece of EU legislation provides a coherent framework for the implementation of policies and the assessment of water quality across EU Member States, including river basins, transitional and coastal waters. The outcome expected from a consistent application of the EU water policy assessment process – illustrated in the figure below – is the achievement of good environmental (ecological and chemical) status and the related benefits at a proportionate cost **or** the maintenance of the water body in a moderate quality status with reduced benefits, due to the disproportionate costs of achieving a better quality status.

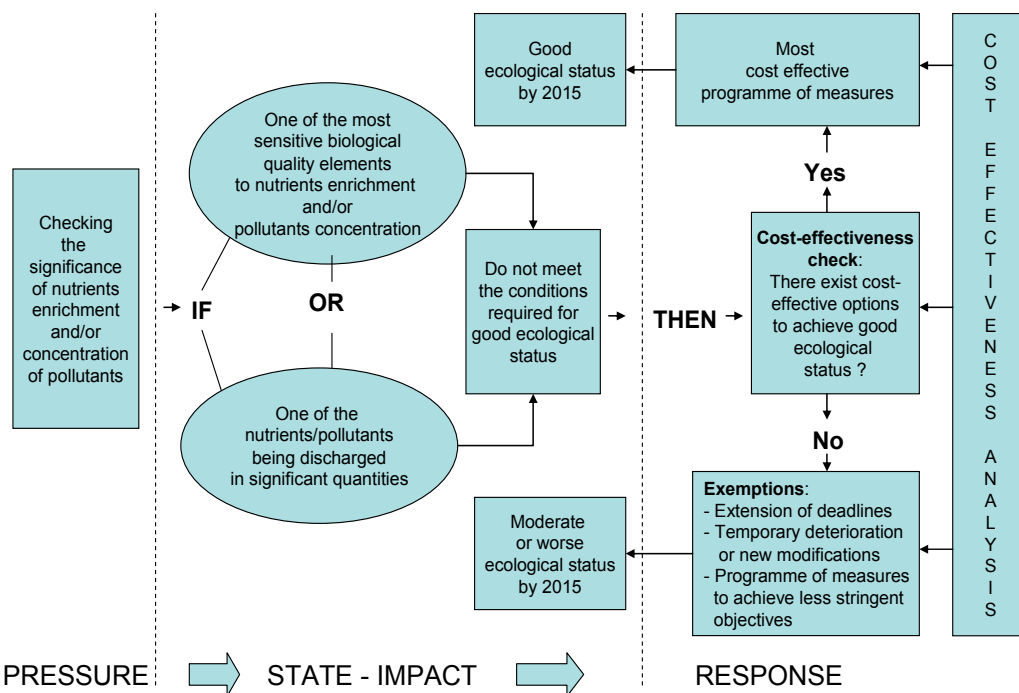


Fig. 1. Water policy assessment process

In this respect, the AWARE pilot experiments can supply a model for future implementation of participatory assessment of the water policies, whereby lay citizens and stakeholders are involved together with experts and policy makers in AWARE-like processes. These may be especially helpful to assess the “proportionality” of costs against benefits in specific case studies circumstances, because the criteria to be used in the assessment are not uniquely technical, requiring instead the explicit consideration of social norms and values. However,

the method is general and may be applied, as mentioned in the introduction, to different societal challenges.

To start with, the AWARE method recognizes that there are different ways to effect an interaction between scientists, policy (managers) and the public – whether citizens and/or stakeholders. These are portrayed in Figure 2.



Fig. 2. From traditional to integrated adaptive management

The traditional way is to treat the three fields as entirely autonomous, interacting only within the established formal procedures of democratic societies, i.e. in the framework of public inquiries as prescribed by law or by delegation through elections. Today it is however more common to follow what has been called a ‘participation-limited’ adaptive management approach (Kusel et al., 1996) which supports the close interaction between scientists and policy but not with citizens or stakeholders. This is pretty much the approach that characterizes the EU Water Framework Directive, as the common framework built up to follow the implementation of the Directive is actively promoting a closer interaction between scientists and policy managers across EU Member States, through the setting up of several thematic working groups. But as the WFD strategists themselves admit, there are shortcomings in their approach, especially with respect to the use of research results from studies other than those commissioned by national governments; and with respect to inputs from stakeholders and civil society.

The integrated adaptive management approach takes a step further and tries to stage and learn from a closer interaction between science, policy, stakeholders and citizens. Such an approach is not necessarily always suitable, but if applicable it displays three main benefits: (a) it recognizes and uses the public as sources of information and knowledge, (b) it builds trust and broadens support and (c) it generates ideas and questions paradigms thus contributing to both learning and creativity in problem-solving. This is what the AWARE process is all about (AWARE, 2011a).

The AWARE process has been concretely performed by recruiting a transnational panel of final water users: 30 citizens randomly selected from three coastal areas of Europe: Gulf of Riga in Latvia and Estonia, Southern North Sea in France and Belgium, and the Goro lagoon in Italy. The citizens’ panel has been engaged in a number of workshops with scientific experts, stakeholders and decision makers to assess the best scientific knowledge available, the local water management practices and the EU water policy framework, and to formulate

their recommendations. The mandate to the citizens was to deliberate their assessment of and recommendations for interfacing experts, citizens and policy makers, to achieve a better management of coastal environments in Europe. This assessment has been presented and discussed in the AWARE European Conference “Linking research to policy in the water sector”, held on June 9, 2011 in Brussels, at the European Economic and Social Committee (AWARE, 2011b).

More in detail, the whole process entailed a sequence of activities at EU and local level in the pilot areas, focusing on the same issue – coastal waters’ deterioration – in the three different Science-Policy Interface contexts described in the box overleaf.

2.2 The AWARE citizens conference process

The panel of 30 randomly selected citizens was the catalyser of the overall process: they met with scientists in a first European workshop – to be acquainted on the topic, the process and their mandate – then split in sub-groups of 10 citizens for each pilot area and met again scientists, stakeholders and decision makers in local workshops and conferences, and finally they convened together all again at the EU level to prepare and discuss in a final conference their assessment of the coastal water management topic and the issue of connectivity between science, society and policy makers. The citizens’ assessment and recommendations are presented in the “AWARE Citizens Declaration”¹.

The overall process, with the connection between the EU and local levels, is illustrated in figure 3 below.

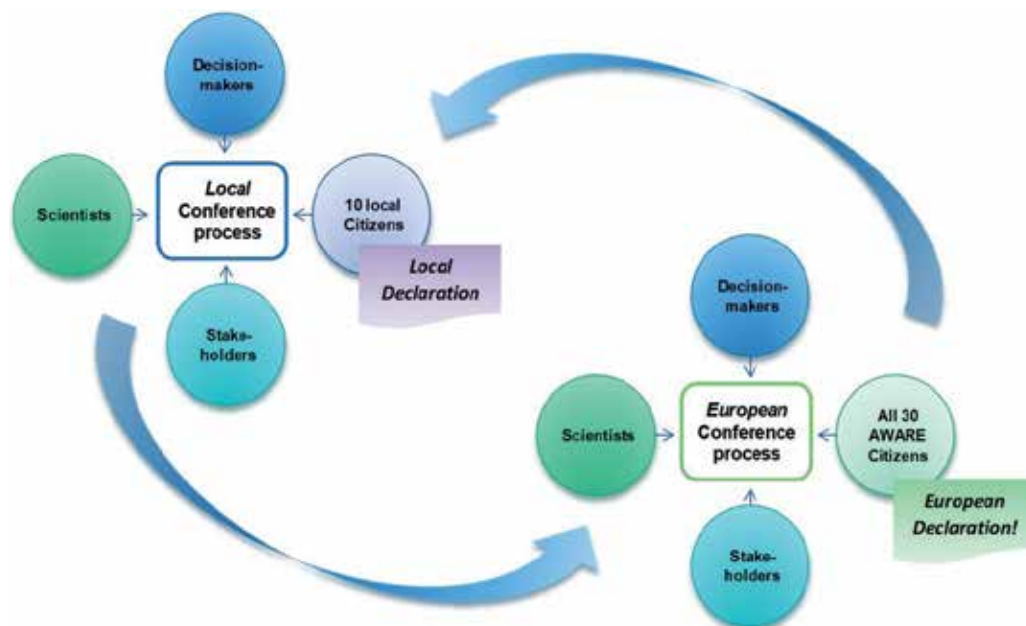


Fig. 3. The AWARE citizens’ conference process

¹ Available on www.aware-eu.net

The Science-Policy Interface focus of the AWARE case studies

The **Southern North Sea case**, as delineated for AWARE purposes, includes the northern part of the French Atlantic coast and eastern Channel, as well as the Belgian North Sea coast. The drainage basin covers the Seine, Somme, and Scheldt Rivers and an area of about 100,000 km². Nutrient pollution of phosphates and nitrates from diffuse sources such as agriculture, are the main focus of this case study. The problem becomes visible to tourists and residents through algae and foam in the water and on the beaches; more subtle changes are also occurring in the changes potentially taking place in the food chain including fish production. Decreasing the pollution in the coastal waters of the case study – in order to achieve Good Ecological Status by 2015 – is a requirement under the EU Water Framework Directive. This case study is transboundary and trans-national. Thus, different authorities across national borders share responsibility for coastal water ecosystem health. The ‘hydrological districts’ set up under the Water Framework Directive are managed by regional water agencies, but national governments are responsible for marine and coastal waters under the OSPAR Commission (Oslo and Paris Conventions for the protection of the marine environment of the North-East Atlantic) and the EU Marine Strategy. Several parallel studies – such as the Liteau, Threshold, Timothy, and PIREN-Seine programmes – have allowed links to be developed between watershed data and events in the coastal area, but data after 2003 for modelling is lacking. Additionally, the science-policy interface, although following a good track record in the region given the collaboration within watersheds, lacks the connection across different watersheds. Scientists from the UMR Sisyphe at the University Pierre & Marie Curie in France, and the Laboratory Ecologie des Systemes Aquatiques at the Universite Libre de Bruxelles in Belgium, used models such as MIRO and SENREQUE-RIVERSTRAHLER to describe various ecological processes in the three case study rivers. Based on consultations with the local AWARE citizens participating from France and Belgium, as well as other project partners and citizens from the two other case studies, the models were also used to test different ‘scenarios’ for measures to reduce nutrients affecting coastal water quality. It is important to note here that the models used in this case study allow for taking into account diffuse and targeted sources of nutrients – the modelling results in fact show that nitrogen pollution is the main challenge in the watershed, stemming from diffuse agricultural sources.

The **Gulf of Riga** is the shallow sub-basin of the Baltic Sea that is shared by Estonia and Latvia. The gulf is exposed to changes from the rest of the Baltic Sea, and the watershed affecting the gulf stretches across five EU and non-EU countries. However, the focus of the case study in the context of AWARE has been on the socio-ecological realities of the two countries mentioned. The Gulf of Riga is suffering from eutrophication due to excessive nutrients, which is common to the whole Baltic Sea. Due to the complex socio-political landscape of the watersheds affecting the Gulf of Riga, a complete assessment and regular monitoring of all contributing river basins is sometimes missing, especially monitoring data on transboundary pollution loads. This also creates difficulties for a continuous science-policy interface, given that transboundary aspects make it hard to establish common grounds for assessments. In terms of involving the public – both citizens and stakeholders – the Public Information Act includes participatory procedures in the decision-making processes. However, it became clear throughout the AWARE evaluation process that top-down approaches used so far can be improved significantly to involve citizens in public discussions, in addition to NGOs and stakeholders. At the European level, the EU Water Framework, Marine Strategy and the Urban Waste Water Treatment Directives provide the framework under which the Gulf of Riga is required to reach ‘good water quality’ by 2020. According to the *Economic Analysis of the Baltic Sea Action Plan with Focus on Eutrophication* measures to achieve this goal – bringing sewage treatment systems up to EU standards throughout the Baltic Sea watershed – are estimated to cost 408-975 million Euro a year, 10% of which would have to be invested in the Gulf of Riga basin (HELCOM and NEFCO 2007). Ministries of Environment in Latvia and Estonia state they are already working to attain EU standards, but more recently updated cost information is needed especially for the wastewater loads from Belarus and Russia. As far as implementation time it seems clear this process will go beyond 2020. However, one of the most controversial issues in the case study, which was discussed in all participatory activities of AWARE and described using models, is the potential conflict between good water quality and probable reduction in fisheries output. This is viewed as a major socio-economic and ecological challenge in the Gulf of Riga. An additional socio-economic challenge lies with the fact that the costs necessary to invest in sewage treatment improvement should be borne by countries with no access to, and direct benefits from, the Gulf of Riga. Scientists from the Uppsala University and Bioforsk have studied the conditions in the gulf, using the CoastMab model. This can be applied for the gulf, as it focuses on different sewage treatment scenarios, and other activities undertaken to decrease eutrophication. Additionally, CoastMab has been used to predict fish yield in the gulf. Although an additional model – the Nest model hosted by the Baltic Nest Institute – has been used for example in the Baltic Sea Action Plan, the AWARE process has focused on the results of the CoastMab model, and worked within that model to discuss citizen-led scenario modifications.

Sacca di Goro is the most geographically delimited case study within the AWARE project as it concerns mainly the Sacca di Goro Lagoon, Ferrara (Italy). The Sacca di Goro is located within the Po delta, which can be considered as the final ecosystem encountered by the Po river waters. This means that, virtually, even the whole Po river watershed could be considered within the geographical scope. The boundaries defined by the AWARE approach, though, include the lagoon, the inland activities bound to agriculture, and breeding and the Po river channels management systems. At present, the Sacca di Goro is one of the top European sites for clam rearing. About one third of the lagoon surface (8 km²) is exploited for clam farming with an annual production that reached a maximum of approximately 15,000 ton/year in recent years. The corresponding economic revenue has been oscillating between 50 and 100 millions of Euros each year. The main socioeconomic issues, therefore, regard the development of a sustainable clam farming activity, i.e. find a balance between natural ecosystem conservation, tourism, social and cultural needs, and the strong economic interests of clam farmers. Thanks to the ecological, biogeochemical and socioeconomic investigations made in the past years, the Sacca di Goro counts on a satisfactory level of scientific knowledge of the ecosystem: in the EU DITTY project a Decision Support System (DSS) and an extensive geo database have been developed. The DSS tool runs through the use of both mathematical models and multicriteria analysis model. Within the experience of the DITTY project, it was experienced that multicriteria models, applied over a lower layer of mathematical models, can support decision makers in dealing with complex systems decisions and in setting priorities.

The role of the AWARE citizens' panel was akin to that of a "citizens jury". *Citizens Juries* bring together a panel of randomly selected and demographically representative citizens for a period of a few days to discuss specific policy issues. They tend to have on average 25 members. The deliberations are conducted by a neutral facilitator and often involve experts on the given issue(s) to deepen the debate. What citizen juries aim to achieve is finding a "common ground solution" on the topic of discussion that is presented to the public (Jefferson Center, 2004). This also means that citizen juries aim to represent a great variety of views through different participants, diverse backgrounds and divided opinions. The term "jury" taken from the court case discourse is here intentionally selected. In a way analogous to a court jury, a citizen jury is usually called to weigh the pros and cons of a particular policy proposal in order to decide on its merits but also for identifying its failings. The information thus gained is subsequently used by policy-makers to revise the policy towards greater balance. This, in turn, can lead to greater acceptance.

A methodological challenge is the selection and recruitment of participants in a citizens jury. Obviously representativeness is a difficult and often unattainable goal for any small-group activity involving on average 25 citizens (30 in the AWARE case). However, a careful selection procedure can result in the representation of a good spectrum of opinions and relevant socio-demographic characteristics. Important in this respect is that the announcement for any citizen participation reaches a large number of citizens and that a significant higher number than the set target is mobilized to apply for participation in the consultation process. In some citizen juries the dissemination target is set as high as 1,000 persons. Such high numbers are easily achievable when the organizers have access to census or register address databases. Equally high dissemination targets can however also be achieved with less intrusive means through the distribution of information in local newspapers, at the city council, through religious or social institutions or the internet. A dissemination strategy targeting some 1,000 citizens and resulting in some 100 to 200 contacts can be considered a success. The final selection follows on the basis of short individual interviews (face-to-face or by telephone) to tap on basic socio-demographic and attitudinal characteristics.

Also in AWARE, the recruitment process of citizens was mostly dominated by the challenge of building a representative sample of the population concerned, and to find people with sufficient English proficiency as well as interest to the topic. The language condition had to be met to ensure that citizens could communicate, in some cases on the regional level already, at least on the European level. Besides this, the selection of citizens was based on their motivations and ideas about coastal water quality. The recruitment of citizens occurred differently among the three case studies. In Sacca di Goro and in the North Sea cases the response rate to the widely lead recruitment campaign was low. In the Gulf of Riga the response to the recruitment campaign was comparatively more positive, potentially due to the activities of the project partner that took on this task, a local NGO - Baltic Environmental Foundation - knowledgeable about the most appropriate dissemination sites that would reach the targeted public (AWARE 2011c).

As it concerns the living interaction throughout the AWARE process among all the participants, relevant knowledge has been provided and brokered in different formats and measures: expert knowledge was provided mainly by scientists, tacit and local knowledge mainly by stakeholders and local policy makers. Citizens also provided local knowledge, as

well as personal experiences of the state of the coastal water resources. The process was also complemented by two rounds of on-line surveys, targeting different stakeholders at local level and a wider scientific and stakeholder community at the European level, and interviews to keynote decision makers, again at local and European levels.

The following table illustrates for each step of the AWARE process the activity undertaken (workshop, conference, on-line survey, interview), the key questions on focus, and the role of the different actors involved: scientists, citizens, stakeholders and decision makers (water managers and/or elected politicians).

STEP	EVENTS/ACTIVITIES	KEY QUESTIONS	ROLE OF THE ACTORS			
			SCIENTISTS/EXPERTS	CITIZENS	STAKEHOLDERS	DECISION MAKERS
Understanding complexity	<ul style="list-style-type: none"> 1st European Workshop 	<ul style="list-style-type: none"> What's the problem? How it works? 	Provide state-of-the-art scientific knowledge.	Share views and values.		
Local assessment	<ul style="list-style-type: none"> Local workshops Local conferences On-line survey Policy makers' interviews 	<ul style="list-style-type: none"> What's the situation here? What is being done? What can be done? 	<p>Apply assessment and scenario tools to analyze the present and possible future states of the local system.</p> <p>Apply decision support tools to evaluate alternative options.</p>	Share views and visions. Elaborate their recommendations at the local level.	Share views and visions (at the workshop and in the on-line survey).	Provide and adapt their perception of local problems and policy needs (at the conference and in the policy interviews). Commitment to enhance connectivity between local actors for a sustainable management of local coastal waters.
Linking EU research, policy making and public participation for a sustainable management of coastal waters	<ul style="list-style-type: none"> 2nd European Workshop European conference On-line survey Policy makers' interviews 	<ul style="list-style-type: none"> How research and policy connections work now? (across EU and across sectors) How to better connect scientists, people and decision makers? What can we do to achieve a sustainable management of European coastal waters? 	Provide state-of-the-art policy knowledge.	Share views and experiences done at local level. Elaborate their recommendations at the EU level.	Share views (at the conference and in the on-line survey).	Share views (at the conference and in the policy interviews). Commitment to enhance connectivity between EU and local actors for a sustainable management of coastal waters across Europe.

Table 1. The AWARE knowledge brokerage and connectivity process.

As it concerns the scientific information delivered in the process, in the Sacca di Goro case, the Elinor Ostrom's general framework for analyzing sustainability of socio-ecological systems (Ostrom, 2009) was used in the knowledge exchange process. In addition, the Analytic Hierarchy Process (AHP) multi-criteria method (AWARE, 2011d) has been used in this case study to evaluate different management options, measuring: (1) the mutual distance of the groups of stakeholders from a common vision of the Goro socio-ecological system, and (2) the priority of actions to be implemented for improving the social, environmental and economic situation of the area.

In the Southern North Sea case integrated river basin-coastal water models have been used to test alternative scenarios with different measures to reduce nutrients from diffuse sources (agriculture) affecting coastal water quality, and the scenario assumptions and results have been discussed with the citizens and the stakeholders convened in a local conference held in Dunkerque, on 7 January 2011 (AWARE, 2011e).

In the Gulf of Riga case the local workshop, held along the gulf coast, was followed by the local conference after only one day. This was due to the more difficult logistics of arranging meetings with a citizens' panel from both Latvia and Estonia. However, the time in between proved sufficient for the scientists to adapt models and scenarios with the input from the citizens, and for these latter to finalize the Citizen Declaration started during the workshop

and prepare for the deliberations with the policy-makers and other participants at the conference (AWARE, 2011f).

In all the case studies, the moderators of the participatory project were carefully selected among the project consortium's experts, bearing the advantage that instead of being recruited solely for the matter of one event, they were involved in the process from the beginning on. Additionally, training was provided by consortium's scientists and invited experts, and prepared with intense exchange of knowledge of the AWARE purpose and context preceding the meetings. The sessions were carefully documented and transcriptions were made available. The evaluation of the project² indicates that the satisfaction with the moderators was relatively high (AWARE, 2011c).

Indeed, the role of the facilitator, experts and other supporting personnel cannot be underestimated, which makes the preparation and performance of citizen participation events rather costly. A key to the success of citizen participation events is the choice of the facilitator. He or she should not represent any of the organizations with a stake in the consultation process and should also not be a scientific expert. He or she is expected instead to have expertise in the moderation and psychology of discussion. The role of the moderator is not only to implement the agenda (thus also keeping to the latter's timing) but also, primarily, to make sure that all opinions are heard and that all participants get their fair share of the discussion. This is an especially sensitive issue to manage, considering that people vary quite significantly with regard to their verbosity but also their capability to articulate their views. Giving every participant his or her fair share of the discussion should however also not result in a situation where participants are "forced" to speak when they do not wish to. A careful balance must, in other words, be established and doing this is the role of the moderator. Moderators are also those in charge to set the rules of interaction such as who takes the floor when, how long one speaks, how does one intervene in the discussion etc. A methodology often used is to break the whole workshop event into single sessions dealing with a coherent sequence of topics, and to divide each session in three steps: 1) presentation of the topic (usually by one or more experts) with the formulation of key questions for the citizens; 2) the citizens discuss their views divided in small sub-groups of 5-6 people, and draw a list of answers, conclusions or suggestions; 3) a (citizen nominated) rapporteur present the feedback of each sub-group in a plenary session. Such procedural elements are especially important for the success of citizen participation as they ensure "civility" in debates.

As it concerns the role of the experts in citizen participation events, they are expected to intervene at specific times to provide expert knowledge not available to the citizens and to answer questions. They should be chosen according to the criteria of impartiality and the ability to communicate difficult or complex subjects. Finally, supporting personnel are necessary for assisting the moderator and or experts – thus for taking minutes, collecting or distributing documentation, moving boards, adjusting equipment and the like. Support personnel are not expected to actively participate in discussions.

² An evaluation workpackage was built into the project structure, in order to draw lessons from the pilot case study performance and outcomes.

On a whole, the evaluation of the AWARE process has been positive (AWARE, 2011c), but with two distinct weaknesses. The first one concerns the interaction between the citizens and the scientific experts. All experts were asked to make their presentations as understandable for a lay audience as possible and with a few exceptions this part of the interaction was successful. However, problems arose from the lack of complete information that the experts were able to convey during the short period of time allocated to them. In some cases even small bits of incomplete information surfaced later in the process in the form of erroneous assumptions on the part of certain citizen groups. This weakness is difficult to overcome because it is impossible to predict which path the citizen deliberations will take and certainly not desirable to determine this path beforehand. One possible solution might be to involve all experts in the proceedings throughout the entire process as something like a “knowledge repertoire”.

The second weakness at the local level was the difficulty to involve policy makers. Indeed, even in those cases where it was possible to organise some form of participation of policy makers, the nature of the interaction was not very productive – it remained on the level of political statements rather than producing a truly exchange of ideas among the policy makers and the citizens. Unfortunately this appears to be at a systemic problem rather than an organisational weakness of the AWARE project. Unlike science, the realm of policy making is not concerned with understanding natural or social phenomena but rather with representing and/or weighting different interests. The active involvement of policy makers in the process immediately raises issues on the legitimacy of any eventual decision taken on the bases of the deliberations formulated by a random group of few citizens.

However, an alternative way to enable a more productive citizens-policy makers interaction is to trigger a continuous informal process of confrontation on key sustainability science-policy issues between the policy makers and the citizens involved in AWARE-like awareness raising process, to help bridging the gap between the citizens “street-level” information, perspective and understanding of the topic, and that of the elected representatives. In this process it may even happen that one or more citizens of the group are motivated to enter the policy arena: this was the case of two citizens of the Goro’s group that participated to the local elections, and were actually elected as Mayor and councillor of the Municipality in May 2011.

2.3 The AWARE citizens conference outcomes

A concrete outcome of the AWARE process is the *Citizens Declaration*. However, besides the citizens’ assessment, the AWARE case studies showed that all participants gained new and significant understanding and insights on coastal water management through participating in a set of local workshops and conferences. They exchanged views on a broad range of issues relating to the short and long term health of coastal waters. The groups in all three case studies also addressed specific problems related to agricultural policy, water quality and pollution, and socio-economic trade-offs. The following are some lessons learned and the most significant comments from different participants: citizens’ panels, scientists, stakeholders and policy-makers attending the local and the European conference, interviewed or answering to the on-line surveys.

2.3.1 Highlights from the citizens

The AWARE citizens' panels are willing to convey their message at all levels – European and local – which includes sharing the experience they gained on this project, and taking home with them ideas that will foster change. In particular, school campaigns are thought to be the most effective action to educate children and their families in environmental-friendly behaviors and participatory approaches (this opinion is also shared by scientists). However, it was also claimed that action is needed right now, and that we cannot only rely on the ideas of better-educated future generations. In this respect, local events and festivals can be used to inform citizens. To involve actively citizens is indeed very difficult, but the institutions need citizens perhaps even more than citizens need the institutions.

“People want to know” and “people are able to think”. Citizens believe they have the rights to express their concerns and they want to be considered on the same level as scientists and other stakeholders. Citizens are willing to be informed and take part on the kind of assessments used in AWARE, but appropriate information channels must be used. An example may be creating a new role for *scientific ambassadors* acting as public communicators. In fact, this role has existed for instance in the French National Agency for Water and Aquatic Environments (ONEMA), but only targeted towards policy-makers; the EU Water Framework Directive focus on public participation however should ideally create further opportunities for such a role, especially in the new rounds of consultations for the river basin management plans.

A balance between socio-economic and environmental aspects and priorities is needed when building scenarios for improving environmental challenges. Indeed, decisions taken in consultation with all affected actors around the table are more likely to be sustained and supported in the long term. Establishing links between stakeholders and bringing them together to discuss in the same room at the same level is a key requirement.

2.3.2 Highlights from the scientists

The scientific award system – the one that values the achievements of a scientific career – should recognize and promote the participation of scientists in this kind of participatory initiatives: spreading the word, tailoring scientific results to various target audiences, participating in public and decision-making processes and stakeholder dialogues, etc.

Including the opinions of stakeholders and citizens enrich scientific models, scenarios and help develop more robust results. Systematic approaches should be developed to promote this type of involvement. In addition, the citizens' input helps the scientists to focus on a really comprehensive view of the problem at stake, avoiding the typical scientific compartmentalization.

An important outcome of the project is that throughout the process the citizens became more like scientists and scientists more like citizens: AWARE started building a common language between communities, based on common understanding of complex issues and on increased awareness gained in a common, neutral forum.

A larger inclusion of socio-economic factors would be advisable for future experiments, not only due to the requirements of European legislation but also because is directly called in by

the citizens. There is a need to move into broader frameworks that give more relevance to such socio-economic aspects, like the Integrated Coastal Zone Management.

The AWARE Citizens' Declaration and the final conference where it was presented raised the question of environmental democracy. Science launched the AWARE project (amongst other Science-Policy Interface initiatives), but now the initiative and decision should be social. This claims for more action research focusing on sustainability challenges and aimed to deliver environmental and social change.

2.3.3 Highlights from the water manager and policy makers

From the AWARE experience, it seems that policy-makers and water managers form the most difficult group to engage in public participation processes, unless such activities are part of their agendas. The policy and water managers community would find a summary of guidelines or best practices based on the AWARE experiment a very useful resource for future initiatives and activities. In addition, an overview of the current status of implementation of the EU Water Framework Directive Article 14 on public participation would be very useful, covering all Member States. While the scope of the public consultations run under the Water framework Directive vary a lot between countries, they usually failed to involve individual lay citizens, which is where the AWARE project has demonstrated a new and effective approach. Additionally, a policy agenda that focuses on each step of education - from early stage to long life learning, in formal and informal settings - should promote a larger up-taking of scientific results by the public.

It is clear that only by reaching the majority of the society - not just a small elite of concerned people as the AWARE citizens panel - can societal challenges effectively be addressed. For this purpose, social networks and mass media are becoming essential tools. Despite the number of persons who agree with this statement, many have already tried - unsuccessfully - to apply social networks in similar initiatives. Very good skills on modern communication, dedicated time and resources, and a very specific target group seem indispensable for such tools to be truly successful. The AWARE citizens' panel, for instance, rejects that kind of approach and communication experts confirm that face-to-face methods are required when dealing with challenging and complex issues.

The Science-Citizens-Policy projects must deal with - and fight against - an excessive fragmentation of institutional roles and competences, both within the water sector and between the water sector and other related sectors such as agriculture and tourism. Coordination of main decision-makers, better and more efficient use of funds, and more efficient circulation of best practices are perhaps more important than further funding. The main problem with multi-level governance is however that the lower levels (e.g. municipalities) that can work close to the citizens and organize local participation processes usually do not have the financial resources for implementing what the citizens propose. Often the funds are available only at higher levels of government and not easily/immediately accessible for local decision makers, with the result that the expectations of the citizens are eventually not met.

Strengthening the connectivity between researchers, policy-makers, key stakeholders, and civil society can certainly improve the water quality and ease the water management in Europe. This kind of participatory approaches can be more easily implemented in water

management at the local level. The same process at the national or European level is not considered so simple. Enlarging the scale leads to greater expenses to let citizens from different countries of Europe to meet and work together, language barriers and perhaps a more difficult focus on tangible problems – as compared with the local scale – but it also increases the understanding of the whole complex issue, and the perceived relevance by the participants and, thus, their commitment. Besides promoting AWARE-similar science-policy interface projects, citizens should also be encouraged to build stronger and more active communities and to exercise pressure on their parliamentarians and politicians to take action. Citizens should also use existing consultation channels in public institutions, such as public hearings.

3. Theoretical foundations

The nature and scope of democratic politics in modern societies has been a subject of academic and political debate since the early days. A key issue has always been the extent to which it is possible to sustain active and dynamic democratic practices in a large and complex polity. Already in the Federalist Papers, the founding fathers of American democracy Madison, Hamilton and Jay writing under the pseudonym “Publius” debated the importance of federalism for a large, multi-lingual, heterogeneous and divided country like the United States at the time. One of their main arguments was that within a large polity federalism was a facilitator – and not an inhibitor – of democracy because only federalism with its many levels of government could ensure that there were enough checks and balances on central government but also on powerful interest lobbies. A few centuries later, the European Union finds itself facing similar, even if more complex, challenges as it seeks to advance beyond economic integration towards political integration within a multi-level governance framework.

Whether the European Union will evolve into a full federal state remains an open question (as this could imply a significant loss of national sovereignty it is evidently not favoured by either citizens or political elites). But even if the future of the European Union lies rather in inter-governmentalism, which delineates a regulatory model of loose coordination (Majone 1996) rather than a political model of institutional convergence, one thing is certain: that in a multi-level government polity it is no longer possible to rely alone on representative democratic institutions (such as the parliament) and procedures (such as voting) to obtain citizen input into decision-making. A complex democratic polity requires a multi-faceted *public sphere* (Habermas 1991, 1998) and this, in turn, calls for more stakeholder involvement in decision-making (hence governance rather than government – see EC 2002) as well as more latitude for deliberative processes (Schmitter 2000, Giorgi et al. 2006).

Unlike representative democracy which is conceptually based on the model of delegation, deliberative democracy calls for “active” citizenship (Barber 1984, Held 1996). Active citizens are those who mobilize within communities or social movements and who thus endeavour to impact on policy-making. “Activated” citizens are those who take part in citizen deliberative forums organized by national or, principally, local governments for tapping on citizen views on specific policy proposals. Policy forums, insofar as they are organized by public authorities, are a form of top-down citizens participation, different from bottom-up active citizenship (as in community or social movements).

Both forms of participation, but especially bottom-up community or social movements, are often criticized for the single-issue orientation: their objective is to bring change in one policy area – and often within a strictly delineated sub-component – and this goal is pursued without due consideration to other effects or other groups of users. Top-down citizen participation is further criticized for being more prone to manipulation given its dependency on public authorities or “the policy-maker” for infrastructure and funding. Even though these are dangers that must be borne in mind, it is equally important not to fall into the trap of magnifying them beyond proportion. The conception that democratic politics can ever be “free” or “pure” in the sense that they involve no strategic considerations – hence the possibility of manipulation – is misplaced as is well-known from studies about strategic voting, lobbying or populism in representative politics or studies of the civil society in deliberative politics (Giorgi et al. 2006).

Within the realm of top-down deliberative politics much, in fact, depends on the organizational format and procedures followed. The form of deliberative processes is thought to influence the content – and indeed, like in democracy more generally, this is known to be the case (Move Together, 2009). Citizen participation differs in terms of its objective (why is citizen participation being sought? What will the final output be?), design/methodology (who will participate and how will participants be selected? What instrument will be implemented to achieve the objective?), as well as scope (how many citizens should participate? How long and how often will meetings take place? What resources are available?). Despite the various forms citizen participation can take, the underlying purpose should be the intensification of effective participation in and influence of ordinary citizens on policy development and formulation, particularly when their lives and communities are impacted by these policies. Ideally citizen participation should also be experienced as “empowering”, meaning that citizens emerge out of the participatory experience with greater knowledge and the feeling that they wish to continue to actively contribute to policy-making in their role as citizens (Fung et al., 2003).

Despite the enthusiasm for promoting democracy, most of the calls for more democracy and citizens participation occur at the same time that we witness the disturbing decline of democratic practices in the Western democracies. Many factors explain the wane of the citizen’s role. Among the most important is the social and technical complexity of modern societies (Fisher, 2005). What are the possibilities, many ask, of the ordinary (that is, non expert) citizen deliberating intelligently on the policy issues confronting the decision makers of such societies? Are not these issues better addressed by the professional experts? What evidence supports any contention that citizens can effectively participate in helping to make the complex decisions facing contemporary policy makers?

Hard evidence demonstrates indeed that the ordinary citizen is capable of a great deal more participation than generally recognized or acknowledged (Fisher, 2005). Citizens participation is not to be seen as a magic cure-all for economic, social and environmental problems, nor is deliberation meant to direct attention away from questions of interest and power. But it does hold out the possibility of bringing forth new knowledge and ideas capable of creating and legitimating new interests, reshaping our understanding of existing interests, and, in the process, influencing the political pathways along which power and interest travel. Deliberations of ordinary citizens, if appropriately framed, can help not only in searching solutions to pressing environmental and social problems, but they can also

contribute a kind of knowledge – in particular, local knowledge – that the professional expert requires. Challenging the scientific expert's methodological emphasis on "generalizable knowledge", post-positivist theory underscore the importance of bringing in the local contextual knowledge of the ordinary citizen. To be usable, knowledge has to be applied to a particular situation or context. In this sense, the case for participation is seen to be as much grounded in epistemology as in democratic politics. Appropriately framed citizens participation might best thought as a way to solve a translation problem: how do we translate abstract propositions into particular contexts?

Broadly speaking, therefore, participation contributes to three important goals. First of all, citizen participation and its normative rationale, deliberation, give meaning to democracy. If we are to take seriously a "strong" form of democracy, all citizens need to deliberate at least some of the time on the decisions that affect their lives (Barber, 1984). Second, citizen participation contributes normatively to the legitimization of policy development and implementation. And third, but not least important, citizens participation can contribute to professional inquiry. Participatory forms of inquiry have the potential to provide new knowledge – in particular local knowledge – that is inaccessible to more abstract empirical methods (Fisher, 2005).

These three goals are the core objectives of the Science-Citizens-Policy Interface and the integrated adaptive management at the core of the AWARE method and pilot applications presented above. However, the issue is scarcely new. Eighty years ago John Dewey (Dewey, 1927) asked how citizens could participate in political decision making dependent on knowledge experts. Indeed, Dewey identified a paradox. As the importance of the citizen grew in the political realm – thanks to the expansion of basic rights in the nineteenth and twentieth centuries – the phenomenon was paralleled by the growth in power of large corporate and governmental organizations directed by managerial and technical expertise. Thus just in the period in which the political influence of the citizenry was taking shape, it was undercut by the rise of bureaucratic organization and technical expertise. For Dewey, the answer to the challenge posed by an unprecedented level of social and technical complexity was a division of labour between the citizens and the experts. On the technical front, experts would analytically identify basic social needs and problems. On the political front, citizens could set a democratic agenda for pursuing these needs and troubles. To integrate the two processes, Dewey called for an improvement of the methods and conditions of debate, discussion, and persuasion. Debate would require the participation of experts, but they would act in a special way: instead of rendering judgements they would analyze and interpret. If experts, acting as teachers and interpreters, could decipher the technological world for citizens and enable them to make sensible political judgements, the constitutional processes designed to advance public over selfish interests could function as originally intended in Western democracies.

Since Dewey's time, the question has only grown in importance. What was then a forward-looking philosophical polemic has emerged today as one of the most pressing questions of contemporary democracy theory. The progress of democracy has been disappointing. Although Western democracies exhibit high degrees of interest group involvement, levels of individual citizen participation have declined rather than expanded. Over the same period, moreover, professional experts have failed to ease the problem. Rather than adopting the role of teacher or educator, as Dewey had hoped they would, experts have largely set

themselves off from the mass citizenry (Fisher, 2005). Instead of facilitating democracy, they have mainly given shape to a more technocratic form of decision making, far more elitist than democratic. To make the matter worse, over the past decades against the increasing complexity of social and environmental problems the experts themselves became increasingly incapable to provide answers and solutions to those problems. In recent years, this concern with both complexity and uncertainty of our problems has lead influential political theorists to rethink their positions on the prospects of democracy. For instance, complexity is one of the main issues that troubles Habermas in his ongoing effort to spell out a theory of deliberative democracy. In his view, “unavoidable complexity” imposes the need for important qualifications in the elaboration of participatory democracy.

Indeed, in this age of complexity, the need of specialized expertise to formulate policies and take decisions bears directly on how much citizens can know about the choices they confront. It becomes increasingly clear that in many policy domains, politics more and more becomes a struggle between those who have expertise and those who do not. Indeed, access to technical knowledge and skill has allowed those with the power to legitimate their political decisions. Conversely, the lack of access to such knowledge hinders the possibility of an active and meaningful involvement on the part of the large majority of the public. For instance, technical languages used by the experts provide an intimidating barrier for lay citizens seeking to express their disagreements in the language of everyday life. Speaking the language of science, as well as the jargon of particular policy communities, becomes an essential credential for participation. Not only does this directly involve the technical dimensions of policy questions, but it concerns the value trade-off and other consequences that follow from the implementation of such policies (Hill, 1992).

The point to be made here is that complexity will continue to ensure the need for professional expertise, but this only brings us to the other side of the problem; namely that the experts themselves are not without their own difficulties. Not only do the experts have their own professional ideological commitments, often conflicting with the public interest, but they possess no analytical wizardry capable of resolving most of the pressing societal problems. Expert judgement, at least in the field of social science, provides few uncontested solutions or answers. So, while we still need experts, expertise cannot stand alone. Especially in social matters, normative assumptions and values are as important as technical analysis. No demonstration of efficiency can ever suffice to convince citizens to accept a social program that they don't believe to be *good, right, or fair*. When it comes to the basic normative assumptions and social understanding that underlay social and policy research itself, the expert can have no privileged status. Rather than providing technical answers designed to bring political discussions to an end, the task for them is to assist citizens in their efforts to examine their own interest and to make their own better informed decisions (Hirschhorn, 1979). Beyond merely providing analytical research and empirical data, the expert should act as a “facilitator” of public learning and empowerment. As a facilitator, he or she becomes an expert in how people learn, clarify and decide for themselves. In choices about how we want to live together – or how to solve the conflicts that arise in the struggle to do so – the experts are indeed only fellow citizens. And it is here that the case for citizens involvement start to become apparent.

More precisely, what does it mean to say that citizens (should) have a role here? Missing from Western political systems are well-developed political arrangements that provide

citizens with multiple and varied participatory opportunities to deliberate basic political issues. Against this state of affairs, there is the need of a more “collaborative” or “participatory” model of expertise and policy making. Decision making procedures, in this respect, must take into consideration the authority and influence that different actors have on the final choices. Should such decisions be left to the experts? What level of influence, for example, should the views of the general public carry when compared, for example, to those of scientists, administrators, elected officials, engaged community leaders, and activists? Who is more capable of judging – for instance – whether a power plant or a new regulatory program serves the interests of the public?

How we devise solutions to these questions is structured by our assumptions about citizens’ cognitive abilities to participate in discussions about complex issues, including their methods of assessment (Fisher, 2005). And here we come to the last, and more basic, theoretical foundation of the citizens conference method and the AWARE experience, which can be found in the John Rawls Theory of Justice and its concept of “Original Position” (Freeman, 2008; Rawls, 1999, 2005).

We contend that citizens juries, if their members are appropriately selected, and the citizens conferences, if appropriately conducted, are the best real life approximation of the original position, the core concept of the Rawls’ theory of justice as fairness. A popular summary of this theory is provided in the box overleaf. In the following we will discuss more in detail the rationale and features of the original position, while its relationship with the sustainability topics and the AWARE experience will be discussed in the next section.

The Original Position has often been compared to the “state of nature” or the pre-political condition of humanity, which was important in the philosophies of early modern social contract theorists. According to philosophers such as Thomas Hobbes and John Locke, in order to understand political obligation, we should 1) first conceive what human beings were like (or would have been like) before the creation of organized societies under government and laws, and then 2) ask a) what reasons would have motivated people to form an organized society and b) what principles human beings in this pre-political condition would have chosen to guide their interaction in a society under an established government. Hobbes argues that in a pre-social state of nature it would be rational for all to agree to authorize one person to exercise the absolute political power needed to enforce norms necessary for social cooperation. Contrariwise, Locke argued against absolute monarchy by contending that no existing political constitution is legitimate unless it could be contracted into without violating any natural rights or duties from a position of equal rights and equal political jurisdiction within a (relatively peaceful) state of nature.

Rawls follows the social contract tradition, whereby there are three items to keep distinct: (1) the pre-political condition, (2) the political order established just as people were coming out of the pre-political conditions, and (3) the actual – and possibly flawed – order under which we all live. Stage (2) of this sequence is thought to reveal what arrangements are just or fair, and it could then be used as a basis for critically evaluating to what extent the actual society (stage 3) is fair. Rawls’ idea of the original position is similar to that of social contract philosophers, except that he is under no illusions that the original position was ever a reality or a “state of nature”. It is a model, a thought experiment, i.e. an abstract mental device to help us understand the principles of justice that would govern the basic structure of a just

Rawls' Mature Theory of Social Justice (Garrett, 2005)

John Rawls is widely regarded as one of the most important political philosophers of the second half of the twentieth century. Rawls' theory provides a framework that explains the significance, in a society assumed to consist of free and equal persons, of political and personal liberties, of equal opportunity, and cooperative arrangements that benefit the more and the less advantaged members of society. Rawls' initial concerns with justice is related to relationships between persons within an association. Rawls' theory urges us to conceive a society as a fair system of cooperation over time, from one generation to the next. He says that the relationship of citizenship is a relation of citizens within a basic structure of society, a structure we enter only by birth and exit only by death. The "basic structure of society" includes the basic social institutions, such as the political constitution and framework for the legal system; the system of trials for adjudicating disputes; the norms of property, its transfer, contractual relations, etc. which are necessary for economic production, exchange and consumption; and finally norms that define and regulate permissible forms of the family. No society could exist without certain rules of property, contract, and transfer of goods and resources, for they make economic production, trade and consumption possible. Nor could a society long endure without some political mechanism for resolving disputes and making, revising, interpreting, and enforcing its economic and other cooperative norms; or without some form of the family, to reproduce, sustain, and nurture members of its future generations. This is what distinguishes the social institutions constituting the basic structure from other profoundly influential social institutions, such as religion; religion and other social institutions are not basic because they are not generally necessary to society and social cooperation (even if they may be ideologically necessary to sustain particular societies and to maintain their status quo). The "first subject of justice", Rawls says, is principles that regulate the basic social institutions that constitute the basic structure of society. What makes basic institutions and their arrangement the first subject for principle of social justice is that they are all necessary to social cooperation and moreover have such profound influences on our situations, aims, characters, and future prospects.

John Rawls develops a conception of justice from the perspective that persons are free and equal. Their freedom consists in their possession of the two moral powers: a capacity for a *sense of justice* and for a *conception of the good*. Insofar as they have these to the degree necessary to be fully cooperating members of society, they are equal. A "sense of justice" is the capacity to understand, to apply, and to act from the public conception of justice which characterizes the fair terms of cooperation. This sense express a willingness to act in relation to others on terms that they can also publicly endorse. A "conception of the good" includes a conception of what is valuable in human life. Normally it consists of a more or less determinate scheme of final ends, that is, goals that we want to realize for their own sake, as well as attachments to other persons and loyalties to various groups and associations. A political conception conceives of persons as having the two moral powers mentioned above, as being responsible for their actions, etc., but does not address whether persons have more comprehensive moral conceptions, including non political values, virtues and beliefs, e.g. whether persons are immortal souls or immaterial substances as, say, Plato and most medieval Christian theologians held. A political conception of justice, says Rawls, has three basic features: 1) it is a moral conception worked out for a specific kind of subject, namely, for political, social and economic institutions (the basic structure of society); 2) it is presented as a freestanding view, and neither as a comprehensive doctrine, nor as derived from a comprehensive doctrine applied to the basic structure of society; 3) its content is expressed in terms of certain fundamental ideas seen as implicit in the public political culture of a democratic society.

The political conception of justice points to a notion of *reasonable citizens*. Citizens are reasonable when, viewing one another as free and equal in a system of cooperation over generations, they are prepared to offer one another fair terms of social cooperation, and they agree to act on those terms, even at the cost of their own interests in particular situations, provided that others also accept those terms. For those terms to be fair, citizens offering them must reasonably think that those citizens to whom they are offered might also reasonably accept them. They must be able to do this as free and equal, and not as dominated or manipulated, or under the pressure of an inferior political or social position. Rawls calls this the "criterion of reciprocity". The second aspect of "being reasonable" is recognizing and being willing to bear the consequences of the *burdens of judgement*. The latter imply that regardless how impartial and altruistic people are, they still will disagree in their religious, philosophical and moral judgments. Disagreements in these matters are inevitable, but reasonable persons can disagree without being prejudiced or biased or excessively self- or group interested or wilful. This is "the fact of reasonable pluralism", which recognises different sources of disagreement – conflicting nature and complexity of evidence, differences about weighting of considerations, vagueness of concepts and borderline cases, disparate experiences of diverse people – as well as the potential conflicts of human interests, due to the "limited altruism" of human beings (whereby we are naturally more concerned with our aims and interests – including our interests in the interests of those nearer and dearer to us – than we are with the interests of strangers with whom we have few if any interactions). Reasonable persons think it is unreasonable to use political power, should they possess it, to repress comprehensive views that are not unreasonable, though different from their own, and so they endorse some form of liberty of conscience and freedom of thought.

The Rawls' political conception of justice holds under some objective *circumstances of justice*, including physical facts about human beings, such as their rough similarity in mental and physical faculties, and vulnerability to attack, as well as conditions of moderate scarcity of resources. The latter means that the political conception of justice is applicable in social contexts where there are not enough resources to satisfy everyone's demands, but there are enough to provide all with adequate satisfaction of their basic needs; unlike conditions of extreme scarcity (e.g. famine) cooperation then seems productive and worthwhile for people. Under such circumstances, the John Rawls account of justice, "justice as fairness", affirm the following principles: I) Each person has an equal right to a fully adequate scheme of equal liberties which is compatible with a similar scheme of liberties for all, and II) Social and economic inequalities are to satisfy two conditions: a) first, they must be attached to offices and positions open to all under conditions of fair equality of opportunity; b) second, they must be to the greatest benefit of the least advantaged members of society. Principle I is named "equal liberty principle", whereas principles IIa and IIb are respectively called "equal opportunity principle" and "difference principle". The equal basic liberties include: the freedom of thought and liberty of conscience; the political liberties and freedom of association, as well as the freedoms specified by the liberty and integrity of the person; and the rights and liberties covered by the rule of law. The equal basic liberties have a priority, as they cannot be denied to certain social groups on the grounds that their having these liberties may enable them to block policies needed for economic efficiency and growth. For instance, a desire to increase the Gross National Product or make airlines run on an efficient schedules cannot alone justify the limitation of basic liberties. The Rawls' second principle means that society may undertake projects that require giving some persons more power, income, status etc. than others – e.g. paying accountants and upper-level managers more than assembly-line operatives – provided that: a) access to the privileged positions is not blocked by discrimination according to irrelevant criteria (e.g. race or gender) and b) the project will make life better off for the people who are now worse off, for example by raising the living standards of everyone in the community and empowering the least advantaged persons (difference principle). What the difference principle does not permit is a change in social and economic institutions that makes life better for those who are already well off but does nothing for those who are already disadvantaged, or make their life worse.

and fair society. Representative (of all adult) persons in the original position are to choose principles of justice. These representatives represent every human being that belongs to the political association of free and equal persons. Due to the profoundly social nature of human relationships, Rawls sees political and economic justice as grounded in social cooperation and reciprocity. For this reason he eschews the idea of a state of nature wherein pre-social but fully rational individuals agree on cooperative norms (as in Hobbesian views), or where pre-political persons with antecedent natural rights agree on the form of political constitution (as in Locke). According to Rawls, we are all “social beings” in the sense that in the absence of society and social development we have but inchoate and unrealized capacities, including our capacities for rationality, morality, even language itself. However, this does not mean that people do not have “natural” moral rights and duties outside society or in non-cooperative circumstances – Rawls clearly think that there are certain human rights and natural duties that apply to all human beings as such – but that they do not provide an adequate basis for ascertaining the rights and duties of justice that we owe one another as members of the same ongoing political society.

The Original Position perspective of justice is that, rather than representing the judgement of one person (as in the Hume’s account of the “judicious spectator”), it is conceived socially, as a general agreement by representatives of all adult members of an ongoing society. There are three fundamental features of the representatives in the original position that need to be qualified to ensure that justice is represented as a general social contract or agreement.

First, the representatives in the original position are *rational* in the sense that they wish to secure for those they represent the kind of goods that would enable them to work out (including to revise if necessary) their own conceptions of the good and then try to realize this good. This feature recognizes that each person has a set of interests which are of his or her own. These interests are linked to the person’s moral power to form, revise, and pursue a conception of the good.

Second, they stand behind a *veil of ignorance*. That is to say, they do not know the following about the persons they represent: their sex, race, physical handicaps, social class, or conception of the good. They rightly assume that the persons represented have these features but they do not know what it is. This veil of ignorance deprives the parties of all the knowledge of particular facts about themselves, about one another, and even about their society and its history. The parties are not however completely ignorant of facts. They know all kind of general facts about persons and societies, including knowledge of the relatively uncontroversial laws and generalizations derivable from economics, psychology, political science, and biology and other natural sciences. They know then about the general tendencies of human behaviour and psychological development, about biological evolution, and about how economic markets work. As discussed in the box below, they also know about the circumstances of justice – moderate scarcity and limited altruism – as well as the desirability of the primary social goods that are needed to live a good life and to develop their moral powers. What they lack however is the specific knowledge of any particular facts about their own lives or other persons’ lives, as well as other specific facts about their society and its population, level of wealth and resources, etc. Rawls think that since the parties are required to come to an agreement on objective principles that supply universal standards of justice applying across all societies, knowledge of particular facts about any

person or society is morally irrelevant and potentially prejudicial of their decision. Indeed, a primary reason for a thick veil of ignorance is to enable an unbiased assessment of the justice of existing social and political institutions and of existing preferences and conceptions of the good. If the parties to Rawls' original position had knowledge of people's belief and desires, as well as knowledge of the laws, institutions and circumstances of their society, then this knowledge would influence their decisions on principles of justice. The principles agreed to would then not be sufficiently detached from the very desires, circumstances and institutions these principles are to be used to critically assess. Summing up, our capacity for a sense of justice is reflected in the operation of the veil of ignorance, as this is what makes the imaginary choices of the representatives in the original position on our behalf fair.

A third feature of the representative in the original position – partially anticipated while discussing the veil of ignorance above – is that they possess a great deal of *common sense* general knowledge about human psychology and sociology. They know, for instance, that humans remember the past, anticipate the future, and interact with things and people in the present. They know that people have diverse interests and talents. They are aware of the general types of situations in which humans can find themselves (they hold what can be called the "everyday life" or "lay street" knowledge, something different and more general than the citizens' detailed knowledge of local circumstances which is mostly valued in participatory processes at local level).

Besides the above features, there are five formal constraints required by the concept of right, and the parties in the original position must take them into account in making their decisions. These constraints are: generality, universality in application, ordering of conflicting claims, publicity, and finality. *Generality* means that, while deciding about principles of justice, these cannot include specific facts or features, as they should be valuable across all societies. The *ordering condition* says that a conception of justice should be able to resolve conflicting claims and order their priority. The *publicity condition* says that the parties are to assume that the principles of justice they choose will be publicly known and recognised as the basis for social cooperation among the people whose relations they regulate. Publicity of principles of justice is required to respect persons as free and equal citizens, and enable them to cooperate and live together on fair terms. Related to publicity is that principles should be *universal in application*. This implies not simply that they hold for everyone in virtue of their being moral persons. It also means that everyone can understand the principle of justice and use them in deliberations. Universality in application then imposes a limit on how complex principles of justice can be – they must be understandable to common moral sense, and not so complicated that only experts can use them in deliberations. *Finality* is related to the requirement of stability of the conception of justice and the commitment of all reasonable citizens towards it. According to Rawls, an important feature of a conception of justice is that it should generate its own support. Its principles should be such that when they are embodied in the basic structure of society people tend to acquire the corresponding sense of justice and develop a desire to act in accordance with its principles. In this case a conception of justice is stable. To be stable, principles of justice should be realizable in a feasible and enduring social world. They need to be practically possible given the limitations of the human conditions. And people should knowingly want to uphold and maintain society's just institutions not just because they benefit from them,

but on the grounds of their sense of justice. A just society should be therefore be able to endure not simply as a *modus vivendi*, by coercive enforcement of its provisions and its promoting the majority of peoples' interests - as when democracy degrades into populism - but for moral reasons of justice shared by its citizens.

Whenever the features and the formal constraints are satisfied, the parties in the original position are motivated only by their own rational interests in making their decisions. Their interests are defined in terms of their each acquiring an adequate share of primary social goods - rights and liberties, powers and opportunities, income and wealth, etc. - and achieving the background social conditions enabling them to effectively pursue their conception of the good. However, since under the veil of ignorance the parties do not know their particular conceptions of the good and all other particular facts about their society, they are not in a position to engage in bargaining, and this represent a radical difference from any procedure of consultation and negotiation with stakeholders whatsoever. In effect, the representatives in the original position all have the same general information and are motivated by the same *general interests*.

Finally, it is important to note that the circumstances of the original position are not suitable for any kind of decision, but mostly for situations of ignorance and uncertainty about future developments which may affect the social position and well-being of the parties (whenever certainty and exact knowledge of the consequences prevail, scientific analysis and expert judgement would be sufficient). The decision at stake in the original position is not an ordinary choice. It is rather a unique and irrevocable choice where the parties decide the basic structure of their society, or the kind of social world they should live in and the background conditions against which they will develop and pursue their aims. It is then *sui generis*, a choice of the conditions for all future choices, and taken under ignorance and uncertainty about the future state of the world where meaningful choices will have to be made. Under the highly exceptional circumstances of the original position - including the gravity of the choice, the fact that it is not renegotiable or repeatable, and the fact that it determines all one's future prospects - it is rational to choose conservatively to protect certain fundamental interests against loss or compromise. Once the rules of justice are decided they apply in perpetuity, and there is no opportunity to renegotiate or escape the situation, whatever a presently uncertain future will be. In this situation, it is entirely rational for the representatives in the original position to be unwilling to gamble with the basic liberties, opportunities and resources needed to pursue one's most cherished ends and commitments. The decisions that emerge from this procedure are fair and at the same time truly precautionary.

4. Mainstreaming the method to build a science-citizens-policy interface in Europe

As anticipated in the previous section, citizens juries, if their members are appropriately selected, and the citizens conferences, if appropriately conducted, are the best real life approximation of the Rawls' Original Position. Indeed, the real life experience of citizens conferences - and in particular of the European citizens conferences organised in the three pilot projects RAISE, MOVE TOGETHER and AWARE - is a practice fitting to the original position concept in three respects.

First, the procedure applied for the selection and recruitment of the citizens jury ensure the impartiality and representativeness of its members. The actual selection of the citizens is carried out using a specific software for random selection of the participants from a pool of candidates collected through a call for applications. The call is open on Internet to all the citizens of the area of concern – the EU Member States in case of full-fledged European conferences, or the districts of a city in case of local citizens conferences – with few requirements: 1) do not hold any specific expertise of or stake in the topic of concern to avoid any conflict of interest (so scientists, stakeholders and decision makers are excluded); 2) to be available to attend a number of events (usually three workshops and a final conference scheduled over one year time, with a commitment of about 8 days of their time); 3) to be sufficiently proficient in a common language, namely English (this applies of course only for the European conferences, not those at local level). In the applications, candidate citizens are required to describe their statistical profile – age, sex, activity (employed, unemployed, retired, student), and usually one criteria related to the topic of concern (for instance, in AWARE what use the citizens more frequently do of the coastal waters, e.g. tourism, fishing, etc.). They are required also to answer to two questions about: 1) how they see the topic of concern; 2) what motivates their participation. These questions aim to understand the moral standing of the participants, eliciting their own views and “conception of the good” in relation to the topic of concern. The random selection ensure statistical representativeness of the jury’s members in relation to the population of candidates, including geographic criteria (e.g. one member of the jury for each EU Member State in the European conferences, or for each district of the city in local conferences), demographic and socio-economic distinctions, and possibly one criteria related to the specific topic of concern. An additional criteria is used during selection, ranking the answers of the citizens to the questions about their views of the topic and their motivations – with the help of a panel of independent evaluators – and allocating different probabilities of being selected for the citizens in the high, medium or low rank (the aim is not to exclude those of medium or low rank, but to gather a jury with a desired mix of the three categories). In this way, each selected member of the jury represents a different segment of the population of candidates. Of course, he or she does not represent in any statistically meaningful way the total population of the area of concern, but only that of candidates. Any bias in the composition of the latter – for instance due to different access to Internet, English skills etc. – will be reflected in the composition of the jury. To enhance the representativeness of the citizens jury against the total population is important however to disseminate the citizens participation process as widely as possible, in order to gather a population of candidates (usually at least 10 times the target number of jury’s members) which is sufficiently representative of the total.

Second, the procedures applied throughout the whole citizens conference process ensure equal opportunity to participate and other circumstances of the original position, namely standing behind a veil of ignorance, publicity and commitment. The members of the citizens’ jury bring with themselves their common sense knowledge and moral attitudes, nothing more. They participate to the workshops and the conference as a kind of “second life” experience, far from their daily activities, cares and interests. Since the beginning of the process they are made aware of their mandate, how the process will be ruled out, and the information they will receive from the experts on the topic of concern. The whole process will be carried out following a structured agenda – which may be flexible and adapted to

specific needs emerging in the process, but maintains a roadmap of basic steps to be accomplished to reach the citizens conference goal. Several practical organization requirements will facilitate the process, including a suitable location, hiring a professional moderator and providing training and information as to the subject of the participation exercise in a language accessible to the citizens, arranging for lunches, dinners and coffee breaks during the meetings, and, last but not the least, ensuring the individual commitment of the citizens to participate to all the meetings – continuity is a must – by signing with them letters of commitment to which are associated reasonable fees to compensate for the citizens' time use.

Third, the topic of concern should be relevant, general and serious enough to require a citizens conference process. In general, citizens participation is not always an appropriate instrument for obtaining input into policy. It is appropriate in those cases where the policy issue at stake is clearly delineated – for instance, in the AWARE project the issue was the deterioration of coastal water quality across Europe and policy was clearly framed in the EU Water Framework Directive – and can be expected to engage citizens' interests because it relates to their lives. In addition, to resemble to the circumstances of the original position, the citizens should be engaged on topics and situations in which there is a substantial ignorance and uncertainty about future developments which may affect their social position and well-being, and that of future generations. Sustainability topics, and in particular the management of common pool resources, are such issues. The term “common pool resources” (CPR) refers to a natural or man-made resource system - fishing grounds, groundwater basins, grazing areas, irrigation canals, bridge and road infrastructure, urban roads and spaces, mainframe computers, streams, lakes, oceans and other bodies of water, to name a few - that is sufficiently large as to make it costly to exclude potentially beneficiaries from obtaining benefits from its use. Resource systems provide “resource units” - fish, water, land for grazing, use of a road infrastructure, etc. - which are appropriated by multiple users simultaneously or sequentially, according to open access or some other socially established rule. The resource units themselves are not subject to joint use or appropriation – they are consumed individually - but the resource system is subject to joint use. In this situation the emergence of “crowding effects” and “overuse” problems is chronic, as we approach an upper threshold in the number of resource units that are simultaneously consumed in the unit of time. When the CPR is a man-made structure, such as a bridge, approaching the threshold of crossing units leads to congestion. When the CPR is a biological resource, such as a fishery or a forest, approaching the threshold may even destroy the capability of the resource itself to continue producing resource units (i.e. the ecosystem service). Decisions at stake in the management of CPR are therefore not ordinary choices. They are *sui generis* as the unique and irrevocable choice where the parties in the original position decide the basic structure of their society, insofar as an agreement is vital to ensure the durability of a common good. The highly exceptional circumstances of the original position - i.e. the gravity of the choice, the fact that it is not renegotiable or repeatable (whenever an ecosystem is destroyed, it will never return back as it was), and the fact that it determines all one's future prospects – are underlying decisions concerning the access and sustainable use of environmental and social resources as well. Moreover, as long as the users of a common pool of resources stay “unorganized”, they cannot achieve a joint return as high as they could have received if they had organized in some way to undertake collective action. As a matter of facts, there is a range of empirical solutions of “self-

government” that can be found in the real world for regulating the access to a limited pool of common resources, alternative to and often more effective than both the privatization of the commons (market ruling) or their central regulation from a state authority (state ruling). These solutions engage groups of actors - e.g. citizens, fishers, farmers, etc. - who are in an interdependent situation, in organizing and governing themselves, and building “bottom-up” institutions and rules of cooperation, sometime with the support of local authorities and, less frequently, fitting in a formal multi-governance framework (Ostrom, 1991). To create such self-government solutions - or revise them under new threatening circumstances such as climate change - may be the subject and mandate of citizen conference processes, which eventually may evolve towards building up constitutional conventions to establish the basic rules for governing the commons. The latter should contribute to institutionalise integrated adaptive management of common resources, including in particular rules for citizens participation and empowerment, and adequate schemes for Science-Citizens-Policy Interface.

The ultimate success of a citizen participation process is when it can be shown that the proposals advanced by citizens are translated - even if only in part - into policy. Indeed, one of the first things citizens invited to participate in consultation processes want to know is how the outputs of their discussions will be used and by whom. However, this type of follow-through is often the greatest weakness of citizen participation processes and the reason why such processes are often viewed with mistrust. It is therefore important to not only ensure that citizen deliberative panels produce outputs but also to document how these outputs are disseminated and, subsequently, used by policy-makers (Move Together, 2009).

The main avenue to achieve this would be to institutionalize the citizens conference processes at EU and local level, by embedding the citizens’ jury methodology in a framework of citizens’ participation rules to be adopted at the different institutional levels, in relation to sustainability topics which are relevant for citizens’ assessment. For instance, at local level, there are a number of permanent participatory forums set out in the context of Local Agenda 21 processes, which are mostly open to and used by stakeholders and civil society organisations, but poorly known or used by lay citizens. These forums usually connect the local administrations with organizations from the local economy and society: they could include also - as a new stream of participation - citizens conferences convened on topics of interest, such as for example the formulation, implementation and monitoring of Sustainable Energy Action Plans in the context of the EU Covenant of Mayors (www.eumayors.eu).

Another avenue would be to mainstream the AWARE experience and approach in the context of EU funded research, with the aim to build up and maintain an effective Science-Citizens-Policy Interface in the whole European Research Area.

This claims for continuing to disseminate the AWARE approach, with the aim to achieve a “snowball effect”. This could be done in the context of the European Union polity by means of a growing number of “European citizens-science projects”, engaging together scientists, decision makers and permanently renovated (through random selection) panels of citizens. These European citizens-science projects will bring researchers **and** citizens from across Europe together in collaborative research experiences, that today are open only to researchers, and this can also contribute to enhance the participants’ feeling of being truly

“European citizens” – a very significant side-effect for the building of the European citizenship and social capital.

One option to scale-up the experience of citizens’ workshops and conferences may be, therefore, creating with the support of the European Commission “*public spaces*” that citizens can access through calls for application to random selections open on Internet – as it was done in the AWARE citizens’ recruitment process. In these public spaces small groups of people (the selected panels) are engaged in European citizens-science projects as a kind of voluntary job.³ While on the job, they stay disconnected from Internet all along the process – even cell phones are forbidden during the workshops and conference sessions – and are involved in an intense knowledge brokerage process with experts, stakeholders and policy makers. At the end of the process, the citizens’ panel co-produce an assessment document (“Citizen Declarations”) which can be disseminated and used again on Internet, developing WIKI-like User-Created Content applications (OECD, 2007) and triggering a continuous dynamic in the blog-sphere. This approach would equate to create as downstream result of the citizens conference process truly “collective awareness platforms” on topics of interest for scientists, citizens and the policy makers, enlarging the arena of participants to spontaneously interested people.

This transition from the “old” to the “new way” of connecting scientists, citizens and policy and market developments is envisioned in fig. 3.

The figure shows the main connections. In the conventional way, EU research funding contributes to the development of Science & Technology (S&T) in Europe (broadly, total Research & Innovation funding in Europe reaches about 200 billion euro per year, and EU funding contributes with about 15 billion euro to this total⁴). In turn, S&T supports policy making by helping decision-makers to deliver better government decisions. S&T may also eventually improve or produce new commercial technologies, products and services sold on the market. Citizens in this traditional picture are mainly seen as “customers” of private companies or “end users” of public services; they do not have enough opportunity to **interact and contribute early in the process** and **shape** the way public government and the private sector tackle societal challenges.

The new way adds a new opportunity for the citizens, that of being randomly recruited in citizens panels – with a commitment that may be framed as a kind of “European civic service” – to make a critical review and assess the societal acceptance of the research being funded by the European Union, in particular to face the grand societal challenges.

These are Europe-wide challenges such as the ageing population, the effects of climate change, and reduced availability of resources (energy, water, land, raw materials).

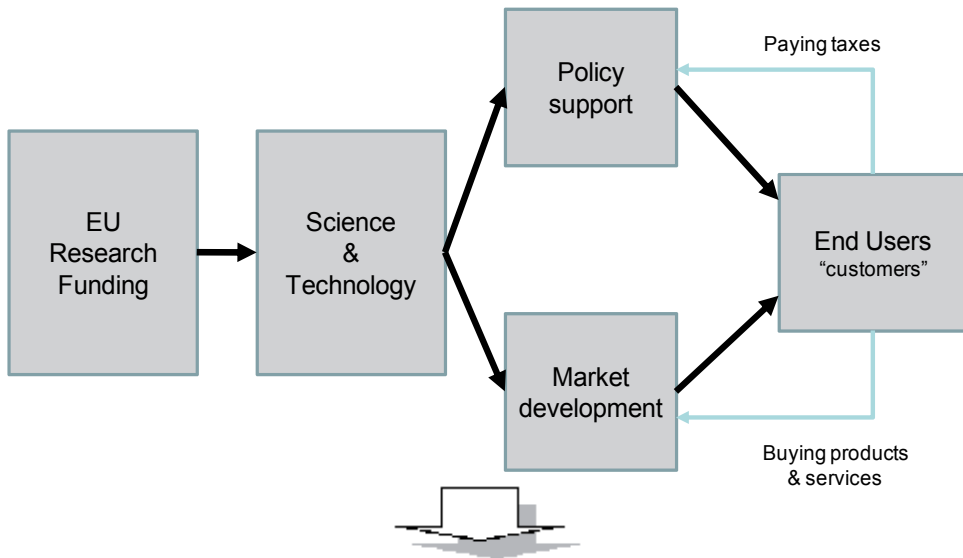
The Europe 2020 flagship initiative “Innovation Union” (European Commission, 2010) called for focusing future EU funding programs more closely to cope with grand societal challenges, which will clearly affect future European citizens health, well-being and quality

³ Time compensation fees may be distributed to the participants, as it was done in AWARE, in order to balance for the citizens commitment that ordinarily may keep from 6 to 10 days of equivalent working days.

⁴ Sources: STC key figures report 2009/2010 and European Commission.

of life. Breakthroughs must be found, for instance, in new treatments for life-threatening diseases, new solutions to improve the lives of elder people, ways to radically cut CO2 emissions and other sources of pollution in particular in cities, alternative sources of energy

The “old” way to connect science and society



The "new" way to connect science and society

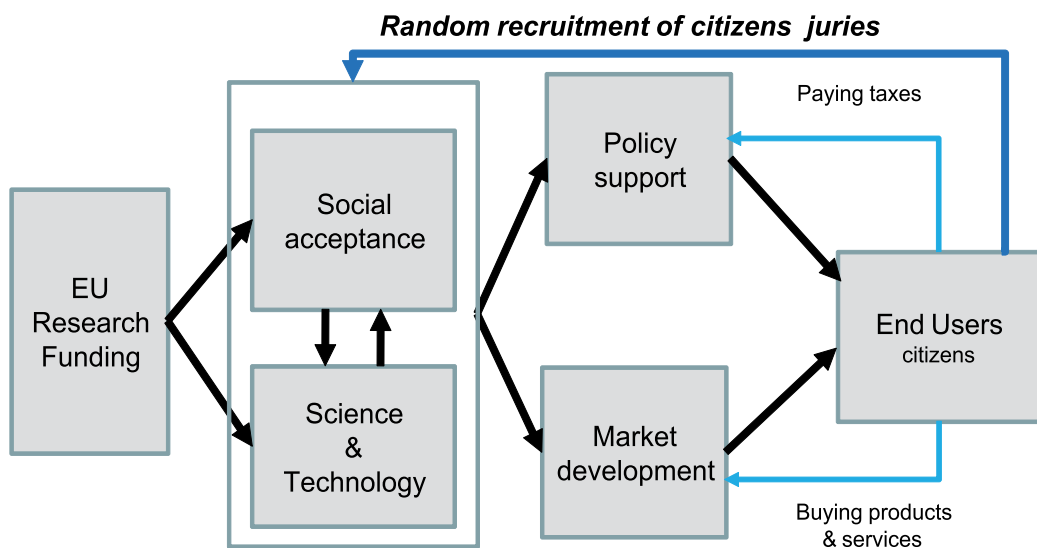


Fig. 4.

and substitutes for increasingly scarce raw materials, reducing and recycling waste and ending landfill, improvements in the quality of our water supply, smart transport with less congestion, healthy or high-quality food stuffs using sustainable production methods, and technologies for fast and secure information handling and sharing, communication and interfacing. The main instruments to connect EU funded Research & Innovation, the business world and civil society are the “European Innovation Partnerships” launched as part of the Innovation Union flagship initiative.

These are going to be launched only in areas – and consist only of activities – in which government intervention is clearly justified and where combining the EU, national and regional efforts in Research & Innovation and demand-side policies will achieve the target quicker and more efficiently. Examples of partnerships being considered first address areas of great concern for the European citizens:

- *Active and healthy ageing*: by 2020, to enable European citizens to live longer in good health by increasing the average number of healthy life years by 2, and, in achieving this target, to improve the sustainability and efficiency of our social and healthcare systems.
- *Smart and livable cities*: by 2020 the aim is to support a number of pioneering European cities in reducing their carbon emissions by more than 20%, increasing the share of renewable energy by 20% and increasing end-use energy efficiency by 20%. The partnership aims to demonstrate that sustainable development of local economies, with a smarter use of scarce energy and natural resources while continuing to improve the citizens’ quality of life, is possible.
- *Water-Efficient Europe*: To promote actions that can speed-up innovation in the water sector and remove barriers to innovation, ensuring higher quality of water and a more efficient use.
- *Smart mobility for Europe’s citizens and business*: To equip Europe with seamless door-to-door travel and effective logistics by promoting the broad and coordinated development of Intelligent Transport Systems (ITS), and building upon available results from research and development to take them further to innovation and concrete operational deployment. Together with needed behavioral changes, this will contribute to achieve a better mobility and transport in Europe, reducing congestion, energy consumption and greenhouse gases emissions from transport.
- *Agriculture productivity and sustainability*: World food demand will increase massively over the next two decades. The aim of this partnership is to promote a resource-efficient, productive and low-emission agricultural sector – which works in harmony with the essential natural resources on which farming depends, such as oil and water.

The European Innovation Partnerships (EIPs) are the new avenues indicated for future research to tackle societal challenges. Bringing researchers and stakeholders from across Europe together in collaborative networks is at the heart of this new approach and will continue to be vital in sustaining a European research fabric. Experience so far has shown, however, the limitations in achieving the necessary flexibility, creativity and cross-disciplinary research needed. Moreover, there is now really the need to get Europe and the European research – as least to the extent that this is going to change the citizens’ life in a foreseeable future – into the minds and lives of ordinary citizens.

But how? One suggestion would be to fix for the next EU Common Research Framework “Horizon 2020” a target of 10% of Research & Innovation funding allocated for European citizens-science activities, mainly in the context of the new European Innovation Partnerships. This would mean an order of magnitude of 1,5 billion Euros yearly (about 3 Euros per citizen) for European citizens-science activities in the new Financial Framework 2014-2020.

The European citizens science projects will include as a participation standard *transnational panels of citizens*, whose members will have to be randomly selected from at least 3 different countries of Europe, applying here the same rule holding today for forming European consortia. Citizens involved in the European science-citizens projects will have the opportunity to meet in several workshops around Europe, and work together with the experts and other citizens from other countries to the same evaluation tasks, writing down their common deliberations.

While doing this, they will have the opportunity to learn and/or exercise English as common language, and to appreciate the different national cultures, exploring commonalities and differences. This process will be open to people from all ages, social status and walks of life, helping to build an European “social capital” of new cross-country relationships and friendship networks. In addition, as the citizens will acquire in the process adequate scientific information on the sustainability topics of concern, they will have through these European projects a concrete opportunity for long-life learning and enjoying new communication skill (not only English, but also from experiencing team work), achieving a better understanding and awareness of how complex societal challenges are.

The engagement of citizens in EU funded projects should be based on a rigorous random selection of the panel members, amongst pools of candidatures submitted to open “calls for citizens” on Internet. Other supporting actions that could be funded from the EU are long-life learning and training activities aiming to enhance the citizens common language and other civic skills, for instance by means of “*European citizens’ summer schools*”, as well as the skills of facilitators of participatory projects. Citizens’ summer schools can be organized by networks of universities and training institutes around Europe, with the support of other regional or local institutions. Applicant European citizens would be trained on EU sustainability policy frameworks and related science issues, and citizens’ participation methods and tools. They will have the opportunity to share an international “classroom” environment, and learn English by working together with experts, for instance to assess the societal acceptance of science topics related to their everyday life concerns.

The final aim of the proposed 10% target of EU research funding for European citizens-science activities is to build up an “*European Public Sphere*” for publicly funded and transparent brokerage activities between scientists, citizens, stakeholders and decision makers. This public sphere should be framed around the main societal challenges, providing an institutional framework to connect public and private research, market and social innovation across Europe. The interplay of the public and private knowledge spheres of research and innovation, aiming to achieve the common goal of sustainable development, is envisioned in figure 5 below.

The figure shows again the main connections between a “public sphere”, where any knowledge production is in principle free (open source), and a “private sphere” where knowledge is privately owned, i.e. protected by intellectual property rights. The private sphere is the place where IPR-based technological innovation, based on the most advanced research achievements, is exploited by business actors to produce and offer to “consumers” on the market new sustainable products and services (e.g. green technologies).

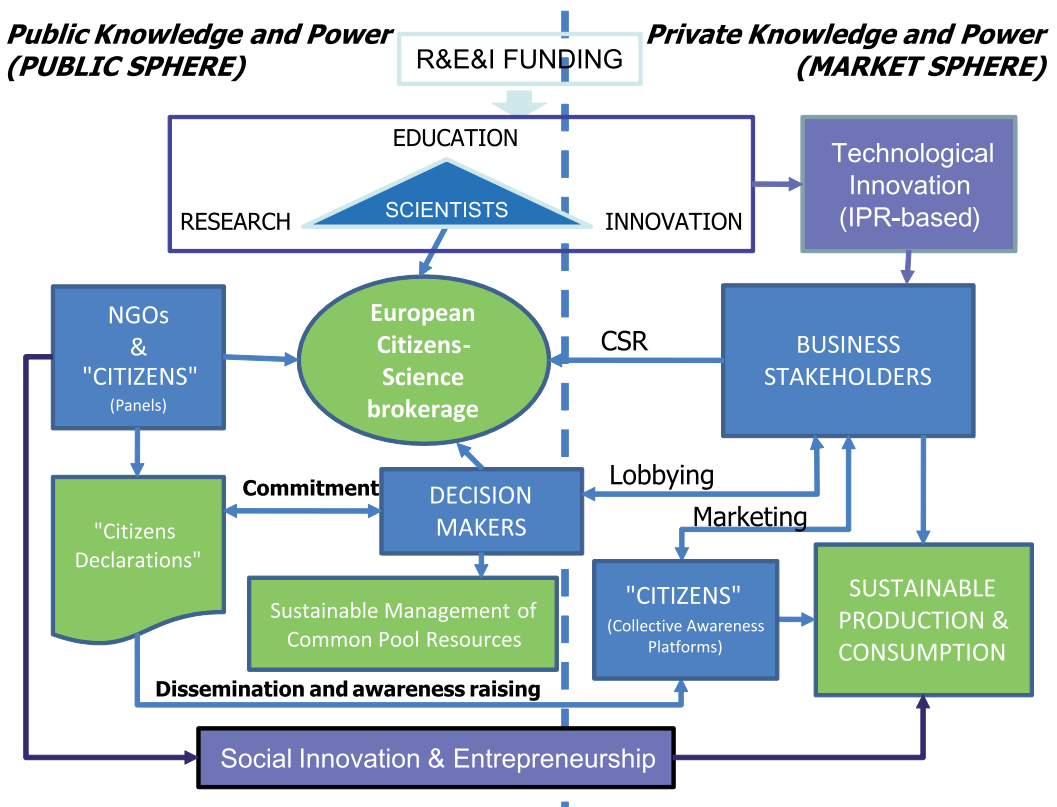


Fig. 5. European Public Sphere for Science and Society

The public sphere is not as neatly delineated in reality as it is in this scheme: currently there are not publicly funded knowledge brokerage programs – besides some sporadic pilot experiments, as those mentioned above and few others.

The systematic and continuous funding of knowledge brokerage processes can change, however, this situation, making the public sphere concretely populated with an increasing number of opportunities (workshops, conferences, summer schools, etc.) for face-to-face

meetings and free exchange of knowledge, team working and democratic deliberation about **common** sustainable development issues. This being the case, scientists, representatives of NGOs, groups of randomly selected citizens and decision makers (either civil servants and elected politicians) will have the opportunity to share their knowledge in the public sphere, being provided with the same state of the art scientific information and with equal opportunities to contribute in the dialogue. They will discuss why and how to tackle the common challenges.

In this picture, also the business stakeholders, following Corporate Social Responsibility (CSR) commitments, may support and participate to the knowledge brokerage process, providing relevant information about their potential contribution to problems and solutions. The citizens panels will help to catalyze the brokerage process producing their recommendations in the form of citizens declarations. These will include commitments towards sustainable management of the issue of concern, be forwarded to the politicians and disseminated to the general public.

Finally, the process initiated in the public sphere can trigger new action plans, with initiatives taken by governments - namely new forms of *public sector innovation*, e.g. policies for the sustainable management of common pools of resources and infrastructures (in key sectors such as energy, transport, water, urban and rural development, etc.) - or directly by civil society actors, with new forms of *social innovation and entrepreneurship* providing sustainable products and services (i.e. non-profit activities on the market).

Summing up, by mainstreaming the application of the innovative method experimented in the AWARE project, the citizens in Europe may have a new opportunity: that of being randomly recruited in citizens panels. Should they choose to participate, they may build up a sort of "European civic service" and undertake, together with scientists and policy-makers, a critical review of legislation, management and research being funded by the European Union to address overarching societal challenges. Active citizens - and those citizens "activated" by means of their involvement in such European citizens-science projects - may contribute in this way to a timely and adaptive governance of sustainability challenges.

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Social Science, Equal Justice and Public Health Policy: Translating Research into Action Through the Urban Greening Movement

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1. Introduction

In Los Angeles, California, United States of America, where one lives, the color of one's skin, and how much money one has impacts one's health and quality of life. One reason for this is that people of color and low-income people disproportionately lack access to safe places and programs for physical activity, including parks, school fields and green streets. People who lack access are deprived of the benefits of green space, including improved physical and mental health, the full development of the child including improved academic performance, positive alternatives to gangs, crime drugs and violence, social cohesion, economic vitality including green local jobs, and other values (García and Strongin, 2011).

Over the past ten years, attorneys, advocates and activists in what has become known as the urban greening movement have worked to alleviate inequities in access to green space including parks, schools and pools, translating social science research, policy and law into systemic social change.

In southern California, Los Angeles State Historic Park, Río de Los Angeles State Park, and Baldwin Hills Park are three best practice examples where community driven organizing and legal campaigns have helped create and maintain parks in neighborhoods that are disproportionately of color and low-income and lack opportunities for physical activity. These community victories for greening, democracy and equal justice took place over the span of a decade in three neighborhoods in Los Angeles, California. Each case study demonstrates how research including public health, demographic, geographic, and economic analyses, geographic information systems (GIS) mapping and demographic analyses, social science, and history were employed to present quantitative and qualitative evidence that supported the use of civil rights and environmental laws to influence the investment of public resources to create and maintain great urban parks. Section 2-5 of this chapter present the evidence. Section 6 presents the legal analyses. Section 7 illustrates the application of the law to the evidence in the context of those parks. Section 8 presents lessons learned in translating research into action. These case studies present replicable models for other cities and regions.

2. The people and geography of the Los Angeles region

The Los Angeles region is densely populated and racially, ethnically, and socioeconomically diverse. While the region offers a wealth of green space and parks as a whole, the green space is spread across a large land area and recreation opportunities are not distributed evenly (García and Strongin, 2011).

2.1 The people of Los Angeles

Los Angeles County is home to more than 9.8 million people (U.S. Census Bureau, 2010a). The City of Los Angeles alone has approximately 3.8 million residents, making it the second largest city in the United States of America by population (U.S. Census Bureau, 2010b). The remaining 60% of the county's population is dispersed throughout the other 87 incorporated cities and numerous unincorporated communities. There is significant racial and ethnic diversity among the county's residents, as shown in Table 1 below.

Race or Ethnicity	Population	Percentage of Population
Non-Hispanic White	2,728,321	27.8
Hispanic/Latino	4,687,889	47.7
Black	815,086	8.3
Asian and Pacific Islander	1,348,135	13.7
Native American	18,886	0.2
Total	9,818,605	

Table 1. Racial and Ethnic Profile of Los Angeles County (U.S. Census Bureau, 2010a)

The population of Los Angeles is not distributed evenly based on race, ethnicity, color or national origin. Racial or ethnic groups are often concentrated in certain communities throughout the county. For example, the percentage of African Americans living in the cities and neighborhoods of South and Central Los Angeles is far higher than the county average (Browning et al., 2010a), while the proportion of African Americans in the San Fernando Valley is far lower (Browning et al., 2010b). The disparities can be extreme between neighborhoods within the same city. Neighborhoods in the eastern portion of the City of Los Angeles, such as Boyle Heights and El Sereno, are more than 80% Latino (Browning et al., 2010c) while fewer than 10% of the residents of some neighborhoods in western Los Angeles are Latino, including Pacific Palisades and Brentwood (Browning et al., 2010d).

There are extreme differences in socioeconomic status within Los Angeles. Despite having many affluent neighborhoods, an overwhelming percentage of residents in some parts of the county do not earn a living wage. The annual income needed for a family of four to provide for its basic needs in Los Angeles County was slightly more than \$63,000 in 2005, more than three times the federal poverty level (Los Angeles County Children's Planning Council, 2006). Fully 93% of households with children in Central Los Angeles and 85% in South Los Angeles fall below this income level. Income disparities are most notable for Latino families, with 89% earning less than 300% of the federal poverty level, compared to only 34% of non-Hispanic white families (Los Angeles County Children's Planning Council, 2006).

2.2 The geography of Los Angeles

Los Angeles is located in southern California, in the southwestern United States. Los Angeles County is spread out over more than 4,000 square miles. The region includes 70 miles of coastline along the Pacific Ocean and mountains reaching elevations of over 10,000 feet (County of Los Angeles, 2011). Los Angeles contains rugged forests, rivers, deep valleys, and desolate deserts, as well as numerous urban parks. The region's many different geographical features provide a variety of recreational opportunities. In fact, it is possible to go alpine skiing and surf in the Pacific Ocean in the same day without leaving the county.

3. Park access in Los Angeles

Despite an overall wealth of parks and recreational opportunities, not all residents share equal access to the region's green space. Where one lives within Los Angeles factors into how much park access one has, and a closer analysis demonstrates that race, ethnicity, and socioeconomic status impact these disparities, as well.

3.1 Park poor, Income poor and communities of color

California state law defines "park poor" and "income poor" communities in order to prioritize investment of park bond funds in underserved communities. "Park poor" is defined as three acres or less of parks per thousand residents. "Income poor" is a median household income of \$47,331 or less (García and Strongin, 2011). Though these criteria apply to the investment of park funds under a specific statewide ballot measure (Proposition 84), these criteria are a best practice example to establish standards to measure progress and equity and hold public officials accountable.

The City Project has used GIS and demographic tools to map the entire state of California at the census tract level to illustrate park poor, income poor communities that are disproportionately populated by people of color. The City Project advocates that park funding be prioritized in these combined "hot spots" (García and Strongin, 2011).

3.2 Measuring park access

There are numerous ways to measure park access aside from acres of parks per thousand residents. The ultimate question is whether the parks meet the needs of the community as defined by the community. There is no single rule of thumb that works. A more useful method is a combination of measures, such as park poor, income poor, communities of color.

The National Recreation and Parks Association (U.S.), for example, at one time recommended ten acres of park space per thousand residents, but more recently supports a more flexible approach (Wolch et al., 2001). Most urban areas in California fall short of ten acres of parks per thousand residents. The total amount of park space within a certain area is important, but this does not take into account who can reach the parks. Another method is distance to the park, measured in miles or "walking distance." This does not address whether nearby parks meet the needs of the community -- for example, if a nearby park is a pocket park and one wants to play soccer.

3.3 Park acres per thousand residents in Los Angeles

In total there are 874,367 acres of green space in Los Angeles, approximately 1/3 of the total land area (García and Strongin, 2011). With a population of 9,818,605, this is 89.1 acres of parks per thousand residents.

Though the total ratio of acres of parks per thousand residents is high for the county as a whole, the distribution of parks throughout the county is not even. The countywide average masks the vast park, school, and health disparities based on race, ethnicity, income, poverty, and access to cars.

Many neighborhoods in the urban core of Los Angeles are densely populated but offer very small amounts of park space. These park poor neighborhoods tend to have disproportionately higher percentages of people of color and low-income people. For example, in the City of Los Angeles, Latino neighborhoods have an average of 1.6 acres of green space per thousand residents, African American neighborhoods average only 0.8 acres per thousand residents, and Asian/Pacific Islander neighborhoods provide 1.2 acres per thousand residents, in comparison to non-Hispanic white neighborhoods with 17.4 acres per thousand residents (Loukaitou-Sideris, 2006).

Considering park access by state assembly district (AD), there are 26 districts fully or partially within Los Angeles County. Park acres per thousand residents range from a low of 0.52 in AD 46 in Central Los Angeles to 3,279 acres per thousand residents in AD 37 in the northwestern county (García and Strongin, 2011). Figure 1 below documents park acres per thousand residents for each district.

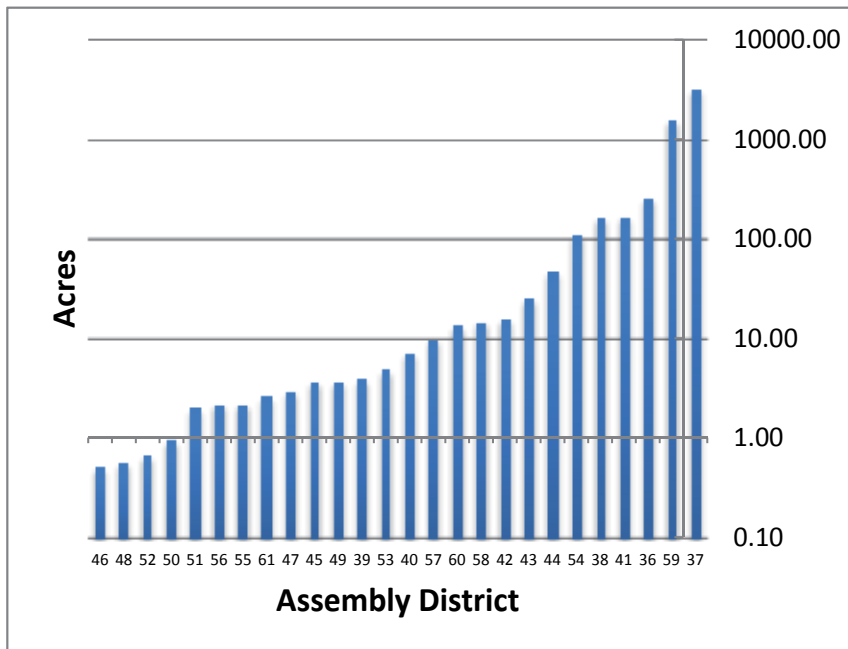


Fig. 1. Park Acres Per Thousand Residents for Assembly Districts in Los Angeles County (Note: chart is on logarithmic scale)

As is true for neighborhoods within the City of Los Angeles, the most park poor and income poor assembly districts in the County of Los Angeles have disproportionately high percentages of people of color and low-income people. Conversely, most of the park rich districts have disproportionately high percentages of non-Hispanic white and middle- or high-income residents (see Figure 2).

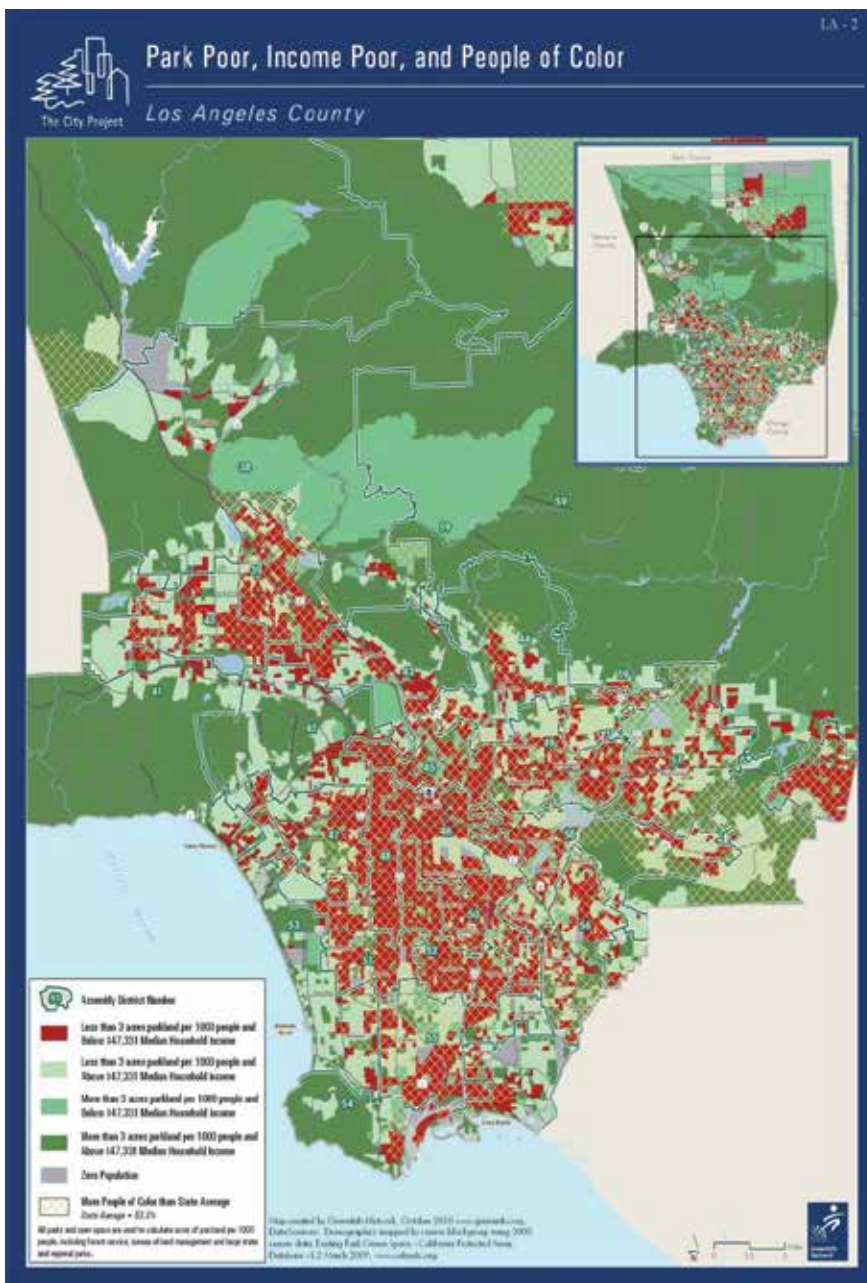


Fig. 2. Park Poor, Income Poor, and People of Color in Los Angeles

4. Why parks matter: The values at stake

Parks are vital components of a community, providing opportunities for physical activity, offering a place for children and adults to play and for families and people to gather, serving as venues where culture, history and art can be celebrated, and functioning as economic catalysts. Additionally, parks offer important environmental services such as filtering air and water pollution, conserving land, protecting habitat for plants and animals and helping to mitigate climate change. There is empirical evidence to support the value of parks. Courts recognize that persuasive evidence includes statistical as well as anecdotal evidence. Anecdotal evidence includes stories of individual experiences and the reality of people's lives.

4.1 Physical and psychological health

Being physically active in parks, and even simply visiting a park, can provide health benefits to all people, from young children to senior citizens. These health benefits include not only physical health but also the joy of having fun, stress reduction, quality of life improvements, and alternatives to at-risk behavior such as crime, drugs, violence and gangs.

4.1.1 Simple Joys

Fun is not frivolous. Children have the right to the simple joys of playing in safe parks and school fields. The United Nations recognizes the child's right to play as a fundamental human right (United Nations, 1989). The United States was founded, in part, for the pursuit of happiness.

4.1.2 Physical activity, obesity and health

Parks and physical activity are an integral part of a comprehensive approach to healthcare and the built environment. As the costs of medical care continue to increase, improving the built environment through parks, green space and walkable green streets should be considered a form of preventive care. Indeed, many experts consider providing safe parks and other recreation spaces as a primary form of preventive medicine (Trust for America's Health, 2008).

This is the first generation in the history of the United States for which children are predicted to have a lower life expectancy than their parents. This is largely attributed to increasingly sedentary lifestyles and rising rates of overweight and obesity (Olshansky et al., 2005). Regular physical activity, along with a healthful diet, plays a vital role in preventing obesity and the many chronic health conditions associated with it, such as Type 2 diabetes, heart disease, hypertension, and some cancers (U.S.D.H.H.S & U.S.D.E., 2001).

Obesity is also associated with greatly increased costs for medical care and lost productivity. The combined cost to California of overweight, obesity, and physical inactivity is estimated to be \$41.2 billion annually (California Center for Public Health Advocacy, 2009). The cost of obesity alone in the United States is \$117 billion annually, including health care costs and lost productivity (U.S.D.H.H.S & U.S.D.E., 2001).

Childhood obesity rates are increasing at the same time physical activity levels among children are decreasing. The precipitous decline in children's physical activity levels, and escalating rates of childhood obesity and diabetes, are alarming epidemics (UCLA Center to Eliminate Health Disparities & Samuels and Associates, 2007). More than one out of every four adolescents in California (29%) -- nearly one million teenagers -- get less than the recommended levels of physical activity (Babey et al., 2005).

Children and adults who live in communities with parks, athletic fields, nature centers and other recreational facilities tend to be more physically active (Active Living Research, 2007). Research shows that park proximity is associated with higher levels of park use and physical activity among a variety of populations, particularly youth. Having more parks and more park acreage within a community is associated with higher physical activity levels (Mowen, 2010). This is particularly true for low-income communities. One study found that people in low-income areas in Los Angeles who live within one mile of a park visited that park four times more frequently and exercised 38% more than people who lived more than one mile away (Cohen et al., 2007). Unfortunately, low-income areas often lack places for physical activity, including parks and school fields. This is one reason that children and teens in low-income areas and children of color have a lower percentage of physically active youth and are especially vulnerable to obesity (Active Living Research, 2007).

4.1.3 Psychological wellbeing

In modern urban environments, parks and open spaces provide needed reprieves from everyday stressors that lead to mental fatigue. This improves the health of adults and children by reducing stress and depression and improving focus, attention span, productivity, and recovery from illness (Maller et al., 2005). Spending time in parks can reduce irritability and impulsivity and promote intellectual and physical development in children and teenagers by providing a safe and engaging environment to interact and develop social skills, language and reasoning abilities, as well as muscle strength and coordination. Parks also provide a place for social support and an opportunity for self-determination, both important factors in reducing stress, lowering anxiety, and improving a person's overall mood. This is true for children and adults (Ho, 2003).

Researchers have found associations between contact with natural environment and improvements in the functioning of children with Attention Deficit and Hyperactivity Disorder (ADHD) (Taylor et al., 2001). Contact with natural environments, such as trees, has also been found to be associated with increases in the psychological resources of individuals living in public housing to make changes that will improve their lives and a decreased likelihood of finding problems insurmountable (Kuo, 2001).

4.1.4 Recovery from illness and trauma

Parks and green space have direct healing effects. A classic study demonstrated that views of trees enhance the recovery of surgical patients and shortens the duration of hospitalizations (Ulrich, 1984). Another study found that for people who had recently experienced a stressful event in their life, the simple act of driving by parks and green spaces improved their rate of recovery (Parsons et al., 1998). Other research has

demonstrated that living in environments with more green space reduces the number of overall health complaints (de Vries, 2003).

4.2 Social development and community cohesion

Parks and recreation programs can play an important role in reducing crime and violence. The City of Los Angeles' Summer Night Lights program keeps select parks open from 7pm until midnight throughout the summer, offering recreational activities, mentoring and counseling programs, meals, and other services, as an anti-gang initiative. There has been a 40.4% overall reduction in gang-related crime, including a 57% reduction in gang-related homicide, in the neighborhoods where the program has operated since the program began in 2008 (Gold, 2010).

Active recreation and team sports in parks can promote positive choices and help reduce youth violence, crime, drug abuse, and teen pregnancy. Sports and recreation can provide life-long lessons in team work, build character and improve academics (Pate et al., 2000). Research shows that children involved in sports and extracurricular activities tend to score higher on standardized tests and are less likely to engage in antisocial behavior (Mahoney, 2000). Additionally, interscholastic sports lead to decreased drop out rates for both boys and girls (Yin & Moore, 2004).

Parks and recreation programs that serve diverse needs of diverse users bring people together in the public commons for the public good. Numerous studies document the fact that people attach different values to green space and use green space differently, both in urban and non-urban contexts (Deming & Savoy, 2002; Low et al., 2005).

Parks and green spaces provide a place for community members to socially interact with other community members. Parks become a source of community pride and inspiration. Social interaction and neighborhood spaces have been identified as key facets of healthy communities supporting social networks, social support, and social integration (Berkman et al., 2000). Sociability may contribute to a sense of belonging and community. In a study conducted at a large public housing development in Chicago, Illinois, vegetated areas were used by significantly more people and those individuals were more likely to be engaged in social activities than similar areas without vegetation (Sullivan et al, 2004).

4.3 Culture, history and art

Parks provide important places that celebrate diverse culture, heritage and art. Cultural, historical and artistic monuments should reflect the diversity of a place and its people. For example, The Great Wall of Los Angeles, by UCLA Professor Judy Baca and the Social and Public Art Resource Center (SPARC), is one of the greatest monuments to inter-racial harmony in the United States and a best practice example of public art in a public park. The recently restored half-mile Wall, the longest mural in the world, is in the Los Angeles River channel (García and Strongin, 2011).

The struggle to stop a proposed toll road through Panhe, a 9,000 year old sacred site of the Native American Acjachemen people located within the present-day San Onofre State Beach, illustrates the profound values of religious freedom, democracy, and equal justice for Native Americans that can be celebrated in parks (García and Strongin, 2011).

Social justice and stewardship of the earth motivate spiritual leaders to support parks, green space and equal justice. The United Church of Christ has published environmental justice studies on toxics in 1987 and 2007 (Bullard, 2007). Cardinal Roger Mahony and the Justice and Peace Commission of the Catholic Archdiocese of Los Angeles, have actively supported equal access to parks and natural space (García and Strongin, 2011). Protecting the earth and its people bears a special meaning in the values of indigenous people around the world (Morales, 2010). Nobel Peace Prize Laureate Rigoberta Menchú, a Mayan woman from Guatemala, has praised work to promote equal access to parks and recreation as a way of giving children hope and saying no to violence (García and Strongin, 2011).

4.4 Economic vitality

When cities create urban parks, property values increase, local businesses benefit, and jobs are created, contributing to the local, state and national economies. Important lessons can be drawn from the New Deal on the importance of including parks and recreation in economic stimulus activities (The City Project, 2009). New Deal projects included the creation of 8,000 parks and 40,000 schools. The Civilian Conservation Corps expanded open space and created three million jobs (Maher, 2008). The CCC is a best practice example for economic stimulus using green local jobs.

One recent study of the San Diego region in southern California found that being located near open space adds between five and ten percent to the value of a home, in both high income and low-income communities (The 32nd Street Task Force, 2009).

Other places across the United States have seen economic benefits as well. In Chattanooga, Tennessee, warehouses were replaced with an eight-mile greenway and property values increased by 127% while the number of businesses and full time jobs in the city more than doubled. San Antonio, Texas revitalized the San Antonio River and the river park became the most popular attraction in the city's \$3.5 billion tourist industry. After expansion and restoration of the Martin Luther King, Jr., National Historic Site, in Atlanta, Georgia, the African-American neighborhood of Sweet Auburn was revitalized, with dozens of new homes, 500,000 annual visitors boosting local business, and a decrease in crime (Lerner & Poole, 1999).

Beyond real estate values, parks and recreation help strengthen and stimulate the economy through sports and recreation-related sales of clothing, equipment, fees and services and the revenues generated from the tourism and hospitality industries. A study by researchers at Sacramento State University found that visitors to state parks in California spend \$4.32 billion in park-related expenditures per year statewide. The study also found that each visitor spends an average of \$57.63 per visit, including \$24.63 within the park and \$33 outside the park (García and Strongin, 2011). Researchers found that the New York state park system generates more than \$5 in benefits for every \$1 in costs. The annual economic impact of the park system is close to \$2 billion in output and sales for private businesses, in addition to providing 20,000 jobs (Heintz, 2009).

4.5 Environmental services and climate justice

Parks also play an important role in combating climate change and global warming, as well as in improving the quality of the local environment. Climate change is fundamentally an

issue of human rights and environmental justice that connects the local to the global. With rising temperatures, human lives are affected by compromised health, financial burdens, and social and cultural disruptions. People of color, low-income individuals, and indigenous communities are often disproportionately affected by these disruptions because of where they live and because they may lack the financial resources to overcome these challenges.

Parks provides other important environmental services, as well. One service provided by green space is the absorption and natural filtration of storm water. This can help reduce flooding while also improving water quality (Sustainable Sites Initiative, 2008). Green spaces also promote conservation values including the protection of habitat for plants and animals and clean air, water, and land.

Parks and open spaces allow people to interact with nature and to take value from being in a natural setting. These interactions take on additional importance as more and more people are living in urban settings. For many individuals, particularly in low-income, urban areas, parks represent their only opportunity to escape the built environment, play on grass, and experience a diversity of wildlife (Sustainable Sites Initiative, 2008).

4.6 Equal justice and democracy

Fundamental principles of equal justice and democracy underlie each of the other values above. Those who lack adequate access to these resources are disproportionately at risk for health problems and face more challenges to enjoying the quality of life improvements associated with parks and open spaces.

5. The history of discriminatory access to parks and recreation

The fact that low-income people of color disproportionately lack equal access to parks, school fields, beaches, trails, and forests is not an accident of unplanned growth, and not the result of an efficient free market distribution of land, housing, transit and jobs. Nor are inequities in park access a reflection of individual preferences by people to avoid green space. Instead, park access disparities are the result of a continuing history and pattern of discriminatory land use, housing, education and economic policies and practices. The history of discrimination is relevant to understand how the region came to be the way it is, and how it could be better. While this chapter focuses on the history of Los Angeles, similar historical patterns exist throughout Southern California and beyond. The use of historical evidence is itself an example of translating research into policy, law and systemic social change.

5.1 Discriminatory economic policies

Prof. Ira Katznelson's book *When Affirmative Action Was White* documents how racial inequities were aggravated by economic policies dating back to the Great Depression and the New Deal that had the impact of excluding blacks and increasing income, wealth, and class disparities. A continuing legacy of discriminatory economic policies is that the average black family in the United States holds just 10% of the assets of the average white family. (Katznelson, 2005). More than a million black men fought in World War II, and after the war they fought to make the United States better for themselves. World War II marked the

beginning of the end of Jim Crow. (Litwack, 2009.) Many veterans of color were excluded from veterans' benefits such as housing and education subsidies under the G.I. Bill, however. In the past, when beachfront prices were lower, people of color were forbidden from buying, renting or even using beachfront property. Today, when beachfront property has skyrocketed in value, people of color often cannot afford to buy or rent beachfront property.

5.2 Discrimination and the courts

The California Supreme Court sanctioned racially restrictive housing covenants in 1919 and California courts continued to uphold them as late as 1947. The Federal Housing Authority not only sanctioned restrictive covenants but developed a recommended formula for their inclusion in subdivision contracts. Restrictive city ordinances, housing covenants, and other racially discriminatory measures dramatically limited access by black people to housing, jobs, schools, playgrounds, parks, beaches, restaurants, transportation, and other public accommodations (California Dep't of Parks & Recreation, 1988).

The landmark U.S. Supreme Court decisions in *Shelley v. Kramer*¹ in 1948 and *Barrows v. Jackson*² in 1951 made racially restrictive housing covenants illegal and unenforceable. Even after those decisions, however, blacks and other people of color were excluded from white neighborhoods. "In the postwar era many individual white homeowners, and virtually all the public and private institutions in the housing market, did everything possible to prevent African Americans from living outside areas that were already predominantly black"(Sides, 2003). A U.S. Supreme Court case banned housing discrimination under state law in *Reitman v. Mulkey*.³

5.3 The city of Los Angeles

Los Angeles pioneered the use of racially restrictive housing covenants. As a result, blacks increasingly became concentrated in South Central Los Angeles, for example, Chinese in Chinatown, Mexican-Americans in East L.A., and Japanese in Little Tokyo.

The area surrounding the Los Angeles State Historic Park illustrates this history, and advocates relied on this historical evidence extensively used to support the creation of the park. (García et. al, 2004). El Pueblo de Los Angeles was founded in 1781 near the Native American Tongva village of Yangna, near or at the present site of the park. The first settlers, the Pobladores, were Spaniards, Catholic missionaries, Native Americans, and blacks. Mexicans and Californios further established the city before statehood. Chinese began arriving in 1850 in search of gold but were restricted to working on the railroad and in domestic jobs. They were forced to live on the wrong side of the tracks in Old Chinatown, across "Calle de los Negros" ("Nigger Alley") from the Plaza.

The Chinatown massacre of 1871 first brought Los Angeles to national and international attention. In the 1930s, the city forcibly evicted the residents and razed Old Chinatown to build Union Station. New Chinatown was created at the site of the old Mexican-American

¹ 334 U.S. 1 (1948).

² 346 U.S. 249 (1953).

³ 387 U.S. 369 (1967).

barrio of Sonoratown, near what is now the state park. Mexican-Americans, including U.S. citizens, were deported during the Great Depression as a result of discrimination and competition for jobs.

Japanese arrived because of the labor shortage caused by the Chinese Exclusion Act and settled in Little Tokyo. They were forced into concentration camps at Manzanar and other places during World War II. Little Tokyo became known as Bronzatown when blacks arriving from the South to work in the war industry filled the Japanese vacancies.

The city destroyed the bucolic Latino community in nearby Chavez Ravine with promises of affordable housing, then sold the land to the Dodgers baseball team, who buried the site with 16,000 places for cars to park and no place for children to play.

Despite the prominent role of blacks in early Los Angeles, black residential and business patterns were restricted in response to discriminatory housing and land use patterns. “Whites only” deed restrictions, housing covenants, mortgage policies subsidized by the federal government, and other racially discriminatory measures dramatically limited access by people of color to housing, parks, schools, playgrounds, swimming pools, beaches, transportation, and other public accommodations. Property owners continued tactics to restrict fair housing through the 1960s and beyond, as discussed above.

5.4 Parks and pools

Though not codified in law, parks and other public spaces in Los Angeles were “tacitly racialized” (Sides, 2003). For example, blacks were not allowed in the pool in many municipal parks. At other pools, African Americans, Latinos, and Asians were permitted to swim only on Wednesdays between the hours of 2 pm and 5 pm. This was called “International Day.” The pool was then drained, cleaned, and refilled. Pool segregation continued through the 1940s.

There were some places of refuge, however. Central Playgrounds on Central Avenue in Los Angeles allowed African Americans to swim and play sports. Lincoln Park in East Los Angeles was a popular destination for black youth from South Central and Latino youth from East Los Angeles, who could take the Pacific Electric railroad to reach one of the few parks where they were not feared, despised, and excluded. (Sides, 2003).

5.5 Beaches

When Manhattan Beach was incorporated in 1912, the city set aside a two-block area on the ocean for African Americans. Charles and Willa Bruce, a black couple, bought the land and built the only beach resort in the Los Angeles area that allowed blacks. Bruces’ Beach offered bathhouses, outdoor sports, dining, and dancing to African Americans who craved a share of Southern California’s good life. As the area’s black population increased, so did non-Hispanic white opposition to the black beach. Manhattan Beach, with the help of the Ku Klux Klan, drove out the black community and closed down Bruces’ Beach in the 1930s. City officials forced black property owners to sell at prices below fair market value through condemnation proceedings. The nearby Peck’s Pier – the only pier that allowed blacks – and the surrounding black neighborhood were destroyed. Black Angelenos were then relegated to the blacks-only section of Santa Monica beach at Pico Boulevard known as the Inkwel. In

2006, Manhattan Beach commemorated the struggle of the Bruce family and the African American community by renaming the park at the historical site as Bruces' Beach Park. (García and Baltodano, 2005).

At the turn of the 20th century, Malibu consisted of a 13,316-acre rancho along a 25-mile stretch of beaches, mountains and canyons, owned by Frederick H. Rindge and later by his widow May. To pay taxes after her husband's death, May Rindge began leasing and selling parcels to movie celebrities and others. Parcels carried racially restrictive covenants that prevented people who were not white from using or occupying beach premises except as domestic servants. Even domestic workers who were not white were prohibited from using the public beach for bathing, fishing, or recreational purposes. The demographics of Malibu today reflect its discriminatory history, with the population overwhelming wealthy and white compared to the county. (García and Baltodano, 2005).

6. Legal justifications for equal access to parks and recreation

Park advocates in Los Angeles have used social science research on why parks matter and existing health disparities and park access inequities to support the use of state and federal civil rights and environmental laws to influence the investment of public resources to create new parks (García and Strongin, 2011).

In the United States, federal civil rights laws prohibit both intentional discrimination, and unjustified discriminatory impacts for which there are less discriminatory alternatives regardless of intent, in the provision of public resources, including access to parks and other public lands. States such as California have parallel laws.

Title VI of the Civil Rights of 1964 and its implementing regulations prohibit intentional discrimination based on race, color, or national origin by recipients of federal financial assistance.⁴ Cases of intentional discrimination are relatively difficult to uncover in contemporary society, although some cases do exist. Evidence of intentional discrimination includes: (1) the impact of the action and whether it bears more heavily on one group than another; (2) a history of discrimination; (3) departures from substantive norms in reaching a decision; (4) departures from procedural norms; (5) whether the decision maker knows of the harm a decision will cause; and (6) a pattern or practice of discrimination.⁵

Title VI also prohibits actions that have a discriminatory impact, regardless of whether the impact is intentional or not. The inquiry under the disparate impact standard is: (1) whether a practice has a disproportionate impact based on race, color or national origin; (2) if so, the recipient of public funds bears the burden of proving that such action is justified by business

⁴ See, e.g., 40 C.F.R. §7.30 (nondiscrimination regulations for recipients of federal funds from the Environmental Protection Agency); 43 C.F.R. §7.30 (Department of Interior).

⁵ See *Village of Arlington Heights v. Metropolitan Housing Dev. Corp.*, 429 U.S. 252, 265 (1977); *Committee Concerning Cmty. Improvement v. City of Modesto*, 583 F.3d 690 (9th Cir. 2009) (statistical disparities in providing municipal services evidence of intentional discrimination under Title VI and 11135; U.S. Dep't Justice, Civil Rights Division, *Title VI Legal Manual* (2001), available at <http://www.justice.gov/crt/cor/coord/vimannual.php>).

necessity; and (3) even if the action would otherwise be justified, the action is prohibited if there are less discriminatory alternatives to accomplish the same objective.⁶

As a result, recipients of federal financial assistance, such as cities and counties, are prohibited from engaging in practices that have the intent or the *effect* of discriminating based on race or ethnicity.⁷ To receive federal funds, which many municipalities depend on in part, a recipient must certify that its programs and activities comply with Title VI and its regulations.⁸ In furtherance of this obligation, recipients of federal financial assistance must collect, maintain, and provide upon request timely, complete, and accurate compliance information.⁹

Stated in positive terms, publicly funded proposals including park projects, plans and programs call for the preparation of an equity analysis that includes the following elements:

1. a clear description of what is planned;
2. an analysis of the impact on all populations, including minority and low-income populations;
3. an analysis of available alternatives;
4. the documented inclusion of minority and low-income populations in the study and decision-making process; and
5. an implementation plan to address any concerns identified in the equity analysis (The City Project, 2010).

The U.S. Office of Management and Budget has circulated guidance specifying that recipients of federal funds are to comply with Title VI of the Civil Rights Act of 1964, as well as other equal opportunity laws and principles (Orzag, 2009). The United States Department of Justice under President Obama has re-emphasized the need for federal agencies to enforce, and recipients of federal funds to proactively comply with, equal justice laws and principles including Title VI (King, 2009). The Ninth Circuit has recently condemned the United States Environmental Protection Agency for its pattern of failing to investigate Environmental Justice including Title VI complaints.¹⁰

⁶ See, e.g., *Larry P. v. Riles*, 793 F.2d 969, 981-83 (9th Cir. 1984). Agencies are obligated to comply with the Title VI regulations, even though private individuals and organizations have no standing to enforce the regulations in court. *Alexander v. Sandoval*, 532 U.S. 275, 293 (2001). Private individuals and organizations do have standing to enforce 11135 regulations in court. See *Darensburg v. Metropolitan Transp. Comm'n*, No. C-05-01597 EDL, 2008 U.S. Dist. LEXIS 63991 (N.D. Cal. Aug. 21, 2008).

⁷ Title VI provides: "No person in the United States shall on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." 42 U.S.C. § 2000d (2004). Cf. 43 C.F.R. 7.30 (Title VI regulations from the Department of Interior, which has jurisdiction over National Parks and other public lands). See also Executive Order 12,898 on Environmental Justice (Feb. 11, 1994). The Equal Protection Clause of the Fourteenth Amendment to the United States Constitution and parallel state law also prohibits intentional discrimination. Cal. Const., Art. I § 7. See also Section 1983 of the Civil Rights Act of 1871.

⁸ *Guardians Ass'n v. Civil Service Comm'n*, 463 U.S. 582, 629 (1983) (Justice Marshall, concurring in part and dissenting in part).

⁹ Cf. Executive Order 12,898 on Environmental Justice (Feb. 11, 1994).

¹⁰ *Rosemere Neighborhood Ass'n v. United States Envtl. Prot. Agency*, 581 F.3d 1169, 1175 (9th Cir. 2009).

State law in California also prohibits both intentional discrimination and unjustified discriminatory impacts under Government Code section 11135 and its regulations, which are analogous to Title VI and its regulations.¹¹ In addition, California law defines environmental justice as “the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies.”¹²

The California Environmental Protection Agency has developed an Environmental Justice Action Plan, which addresses development of guidance on precautionary approaches, guidance on cumulative impacts analysis and guidance on public participation (California Environmental Protection Agency, 2004). The California State Lands Commission (CSLC) has developed and adopted an Environmental Justice Policy to ensure equity and fairness in its own processes and procedures. The CSLC adopted an amended Environmental Justice Policy in 2002 to ensure that “Environmental Justice is an essential consideration in the Commission’s processes, decisions and programs and that all people who live in California have a meaningful way to participate in these activities.” The policy commits the CSLC to consider Environmental Justice in its processes, decision-making, and regulatory affairs (California State Lands Commission, 2002).

The California Coastal Commission adopted a local coastal plan requiring Malibu to maximize public access to the beach while ensuring the fair treatment of people of all races, cultures, and incomes in 2002. This was the first time an agency implemented the statutory definition of Environmental Justice under California law. Then-Commissioner Pedro Nava told the *Los Angeles Times* he hoped to set a precedent for other communities, ensuring that visitors are not excluded from public land because of their income or race (Mehta, 2002). The Commission adopted the provision in response to the advocacy of The City Project on behalf of a diverse alliance.

Despite cutbacks in enforcement of civil rights protections in federal courts, both intentional discrimination and unjustified discriminatory impacts remain unlawful under federal and state law. As a matter of simple justice, it is unfair to use public tax dollars to subsidize discriminatory intent and discriminatory impacts.¹³ Recipients of federal and state funds, including many municipalities and their park and recreation agencies, remain obligated to prohibit both.

7. Applying research and law to support equal access to parks

Community alliances have relied on such evidence and laws to help create public lands and preserve access to existing lands in Los Angeles over the past ten years through advocacy in and out of court. Victories include the creation of Los Angeles State Historic Park and Rio de

¹¹ See Cal. Gov. Code § 11135; 22 CCR § 98101(i) (2007). See *Darensburg v. Metropolitan Transp. Comm’n*, No. C-05-01597 EDL, 2008 U.S. Dist. LEXIS 63991 (N.D. Cal. Aug. 21, 2008) (standing to sue publicly funded agency for discriminatory impacts on quality of life for people of color under 11135 and its regulations).

¹² Cal. Gov. Code § 65040.12.

¹³ See, e.g., *Alexander v. Sandoval*, 532 U.S. 275 (2001); *Gonzaga Univ. v. Doe*, 536 U.S. 273 (2002).

Los Angeles State Park as part of the greening of the Los Angeles River, and improved zoning regulations of the adjoining oil fields to better protect human health and the environment at the Baldwin Hills Park. The alliances have relied on several strategies: (1) community organizing and coalition building, (2) strategic media campaigns including new media, (3) policy and legal advocacy outside the courts, and (4) access to justice through the courts. Each of these other strategies are based on the strategy of translating research into action.

7.1 Los Angeles State Historic Park

In the City of Los Angeles, the diverse Chinatown Yard Alliance helped stop a proposal by city officials and wealthy developers to build warehouses in favor of the 32-acre Los Angeles State Historic Park at the Cornfield, the last vast open space in downtown Los Angeles (García et al., 2004). The community within a five-mile radius of the Cornfield is 68% Latino, 14% Asian, 11% non-Hispanic white, and 4% black. Thirty percent of the population lives in poverty, compared to 14% of California as a whole. The median household income is \$28,908 – just 60% of the \$47,493 median household income for the state (García et al., 2002).

The *Los Angeles Times* called the community victory "a heroic monument" and "a symbol of hope" (Ricci, 2001). "Nothing like this has ever happened in Chinatown before," the late Chinatown activist Chi Mui said. "We've never had such a victory. And now, every time people walk with their children down to that park, they'll see that great things can happen when folks come together and speak up. We can renew our community one dream at a time" (García and Strongin, 2011). The victory at the Cornfield required an administrative complaint on civil rights and environmental grounds before the United States Department of Housing and Urban Development to cut off the federal subsidies for the warehouses, as well as a lawsuit under state environmental laws. Ultimately, however, the Cornfield is not be a park because of any court order, but because of a creative deal between Alliance members and the developers. The developer agreed to abandon the warehouse proposal after the Alliance persuaded the State to purchase the site in order to build a park (García and Strongin, 2011).

Unfortunately, as of this writing, the site of the Los Angeles State Historic Park at the Cornfield is not yet a completed park. Budget constraints and other issues have delayed development of the park. In an encouraging turn of events, the California Department of Parks and Recreation released a revised park development plan in December 2010 that calls for construction to begin in 2013 (Guzman, 2010).

7.2 Río de Los Angeles State Park

Drawing on the lessons of the Cornfield, advocates and activists helped stop a commercial development in favor of the 40-acre Río de Los Angeles State Park at Taylor Yard along the Los Angeles River in Northeast Los Angeles after a trial on state environmental grounds. As of this writing, President Barack Obama's report on America's Great Outdoors has named river trails along the Los Angeles and San Gabriel Rivers as one of 100 priority projects in the United States, two per state.

The neighborhoods surrounding Taylor Yard are park poor, income poor, and disproportionately populated by people of color. Nearby neighborhoods offered only between 0.3 and 0.9 acres of parks per thousand residents. Approximately 27% of the residents within a five-mile radius of Taylor Yard lived in poverty and the median household income was just \$32,863. 56% of the residents are Latino, 17% are Asian, 20% are non-Hispanic white, and 4% are black (García et al., 2002).

Even after all parties agreed that the site should be home to a new state park, however, officials with the California Department of Parks and Recreation initially opposed active recreation at Taylor Yard. State officials relented in favor of a balanced park that includes active and passive recreation in light of community needs after The City Project presented an analyses of the policy and legal justifications for a balanced park that included active recreation under federal and state civil rights laws, drawing on the kinds of evidence discussed above (García et al., 2002). "I am all for preserving rocks and trees and those things, but to me, it seems more important to help the children first," according to Raul Macias, a businessman and founder of the Anahuak Youth Sports Association (Bustillo, 2002). The balanced park, which opened on Earth Day in 2007, provides active recreation with soccer fields, courts, a running track, and bike paths, as well as passive recreation, natural open space, and picnic areas. The same youth who play soccer there also plant trees there.

7.3 Baldwin Hills Park

The Baldwin Hills rest at the geographically and demographically diverse center of Los Angeles. Encompassing an area of over two miles, the Baldwin Hills are one of the largest undeveloped areas of open space in urban Los Angeles County (California Department of Parks and Recreation, 2002). This area is the historic heart of African-American Los Angeles, with more than 50% of the population being African-American compared to the countywide average of 11% (García et al., 2010).

Baldwin Hills is one of the most park-poor areas in California, with barely one acre of publicly accessible parkland per 1,000 people. Within a five-mile radius of the Baldwin Hills there is only one picnic table for every 10,000 people, one playground for 23,000 children, one soccer field for 34,000 people and one basketball court for 30,000 people. On weekends and especially on holidays, the gates to Kenneth Hahn State Recreation Area, the only regional park serving three million people within five miles, are often closed before noon because the heavily used park has simply run out of space (California Department of Parks and Recreation, 2002). Even with its rolling hills, stunning views, and historical significance to the development of Los Angeles, one of the most distinguishing characteristics of the Baldwin Hills area is the adjoining oil field with more than 1,000 active oil wells.

A community alliance helped save the proposed Baldwin Hills Park, a two-square-mile park in the historic heart of African American Los Angeles that would be the largest urban park designed in the U.S. in over a century. Advocates and activists stopped a power plant there in 2001, stopped a garbage dump in 2003, and saved the Baldwin Hills Conservancy and its budget in 2005 after a governor's commission threatened to eliminate both. "People sometimes think they can do things like this, believing that this community won't have people to speak up for them, but they're wrong," Robert García told the *Los Angeles Times*.

"This is a human rights issue and fundamentally an issue of equal justice" (García and Strongin, 2011).

Drawing on the lessons learned in the victories at Los Angeles State Historic Park and Río de Los Angeles State Park, the community alliances working to create Baldwin Hills Park have relied on analyses of the racial and ethnic composition of the area, the number of parks per thousand residents, the related health consequences of a lack of places to play, including increased rates of obesity and diabetes, GIS maps and demographic analyses, the history of discrimination, and the values at stake (García et al., 2010).

In July 2011, various parties settled legal challenges to the environmental impact report (EIR) and oil field zoning regulations, also called a community standards district (CSD) to strengthen health and safety protections for residents of and visitors to the Baldwin Hills area that are affected by drilling operations by the Plains Exploration and Production Company (PXP). The petitioners in four lawsuits claimed that the County violated the California Environmental Quality Act by failing to conduct an adequate EIR before adopting the Baldwin Hills CSD, which was intended to regulate 1,100 acres of oil drilling and production activities in Baldwin Hills adjoining park lands. The settlement provides additional protections for people, parks and the environment in the Baldwin Hills, in one of the most diverse areas of Los Angeles and the historic heart of African-American L.A. Key elements of the settlement include:

- Reduced drilling of new wells;
- Increased air quality monitoring;
- More stringent noise limits; and
- Mandatory, recurring health and Environmental Justice assessments.

The County agreed to comply with Title VI of the Civil Rights Act of 1964 and corresponding regulations, and California Government Code Section 11135 and corresponding regulations, among other requirements.

According to the County, the Baldwin Hills oil field is now the most heavily regulated oil field in the nation. The settlement agreement is a best practice example for other Environmental Justice matters.

8. Lessons learned

Green spaces, including parks, school fields, rivers, beaches, forests, mountains, and trails, are a necessary part of the infrastructure for healthy, livable, and just communities. The following recommendations for equitable development are based on the lessons learned from the urban greening movement over the past ten years to help ensure that everyone, especially children and youth of color and low-income communities, benefit equally from infrastructure investments.

1. Prioritize green space projects based on need in communities that are both park poor and income poor. The California legislative criteria for investing park funds in park poor and income poor communities is a best practice example for defining standards to measure progress and equity, and holding public officials accountable.

2. Prioritize projects that address physical, psychological, and social health needs, including childhood obesity and diabetes levels. Applying public health criteria to infrastructure investments could improve health and the quality of life in communities.
3. Prioritize projects that involve the joint use of parks, schools and pools to make optimal use of scarce land, money, and public resources, and expand open space opportunities in densely developed communities.
4. Programs like Civilian Conservation Corps and youth job programs should be funded to create green jobs and keep young people in school, physically active and healthy, and lead to permanent jobs and careers as stewards of the earth and its people.
5. Infrastructure projects should create green jobs for local workers, small and disadvantaged business enterprises, and youth.
6. Prioritize cultural, historical, and public art projects, such as the Great Wall of Los Angeles, that celebrate diversity, democracy and freedom in parks and other public places. Native American sites must be celebrated and preserved.
7. Transportation funding should support transit to trails programs as alternatives to single occupancy vehicles in order to provide access for all to parks, mountains, beaches and rivers.
8. Funding agencies should ensure compliance with civil rights laws guaranteeing equal access to public resources including parks and recreation programs. Compliance with civil rights laws should be combined with other laws including environmental and education laws.
9. Projects should implement principles of equitable development: invest in people, invest in stronger communities, invest in the open, and invest in justice.
10. Implement strategic equity plans to improve parks and recreation in every neighborhood.

9. Conclusion

The urban park experience in Los Angeles demonstrates that social science research combined with legal analyses can be translated into systemic social change to build healthy, livable communities for all. Diverse coalitions have used multidisciplinary research, analyses, and technologies including GIS mapping and demographic analyses to provide evidence of the need for parks in Los Angeles. This evidence has, in turn, been used to support legal actions to implement change by creating new parks in park poor and income poor communities of color. In many cases, the legal tools and actions do not involve litigation.

The lessons presented in this chapter are broadly applicable. Though the type of change sought, the particular circumstances of the situation, and the applicable laws will vary from case to case and location to location, the cases of Los Angeles Historic Park, Río de Los Angeles State Park, and Baldwin Hills Park are all best practice examples of how to affect positive change on communities.

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Environmental Effect of Major Project: Object-Oriented Information Extraction and Schedule-Oriented Monitoring

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1. Introduction

With the increase of human activities, ecological security has become a hot topic across the globe. Now the status of ecological security has been influenced by the disturbance of human activities. Since 1990s, there has been many major projects built in China, such as Qinghai-Tibet Railway, the West-East gas transmission, South-North water transfer and the Three Gorges Dam in China. These projects can bring benefits in regional economic development, and affect ecological environment and ecological security. These effects can also influence operation of project security. One of the important issues is to find a balance between the two points for the smooth running of various major projects.

The focus of this article is ecological environment of major project in Beijing. It is dynamically monitored through the change of main project and ancillary project. A method is put forward to integrate multi-source data and information to collaborative analyse. It ensures the continuity of monitoring. During dynamic monitoring of construction, an advanced object-oriented information extraction of remote sensing technology combined with manual visual interpretation to achieve the extraction of target. This method can establish training data set and interpret knowledge database according to the type, spectrum, geometric and texture characteristic of different project type. Meanwhile, the sevaluation indicator system of different periods according to environmental impact assessment requirements needs to be established. Finally, we use the change detection technique to achieve the monitoring and evaluation of process-oriented of project.

2. Theory and implementation

2.1 Research framework

It mainly includes 3 steps in the object-oriented recognition of major projects by remote sensing images: remote sensing information modeling in high-resolution image, object-

oriented information extraction techniques in high-resolution image and accuracy validation and evaluation methods of object-oriented information extraction.

Object-oriented method is not analysis the target by single pixel, but by a collection of pixel in the image. So we can fully take account of some impact factors, such as relation between the object and surrounding environment. Meanwhile, the knowledge base of object characteristics to extract the information from the image is used.

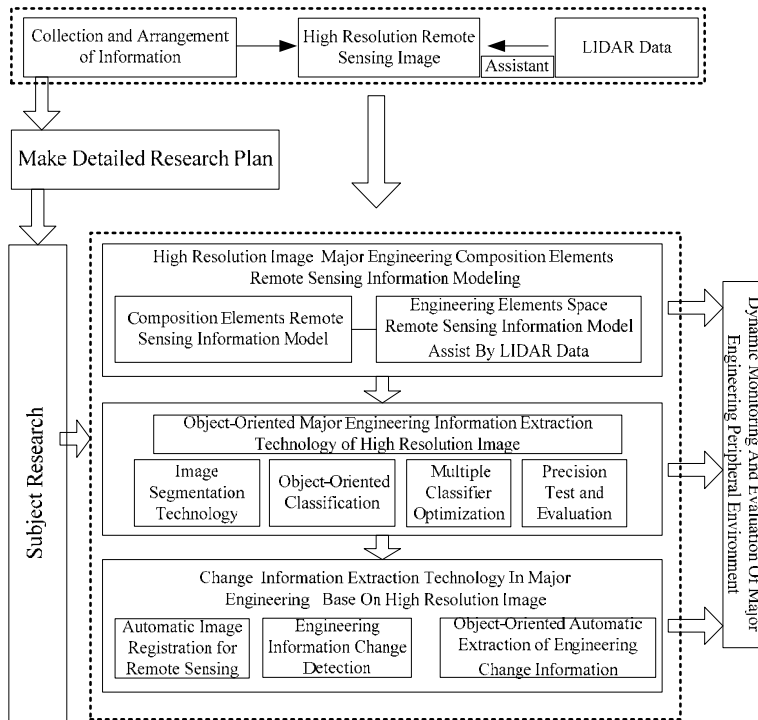


Fig. 1. Information Extraction of Major Project

2.2 Technical route

On the basis of the analysis of the engineering character and the characteristics in the remote sensing images(shape, texture, spectrum), we should combine the actual situations of the major project, choose the right data source, and establish the parameters of the project’s construction schedule and indicator system of its surrounding ecological environment; according to those related parameters, the project’s characteristics are combined in order to analyse and establish the interpret knowledge database of a project’s schedule; and on the support of the database, using the technique of object-oriented to automatic extract the information of characteristic of project schedule and the ecological environment surrounded by project. By combining artificial visual interpretation to modify the extraction results, and through the analysis of the extraction information and the calculation of the monitor index, the project’s construction schedule and impact of surrounding ecological environment with semiautomatic and automatic can be monitored finally. Flow Chart of Major Project by Remote Sensing Monitoring is shown in figure 2:

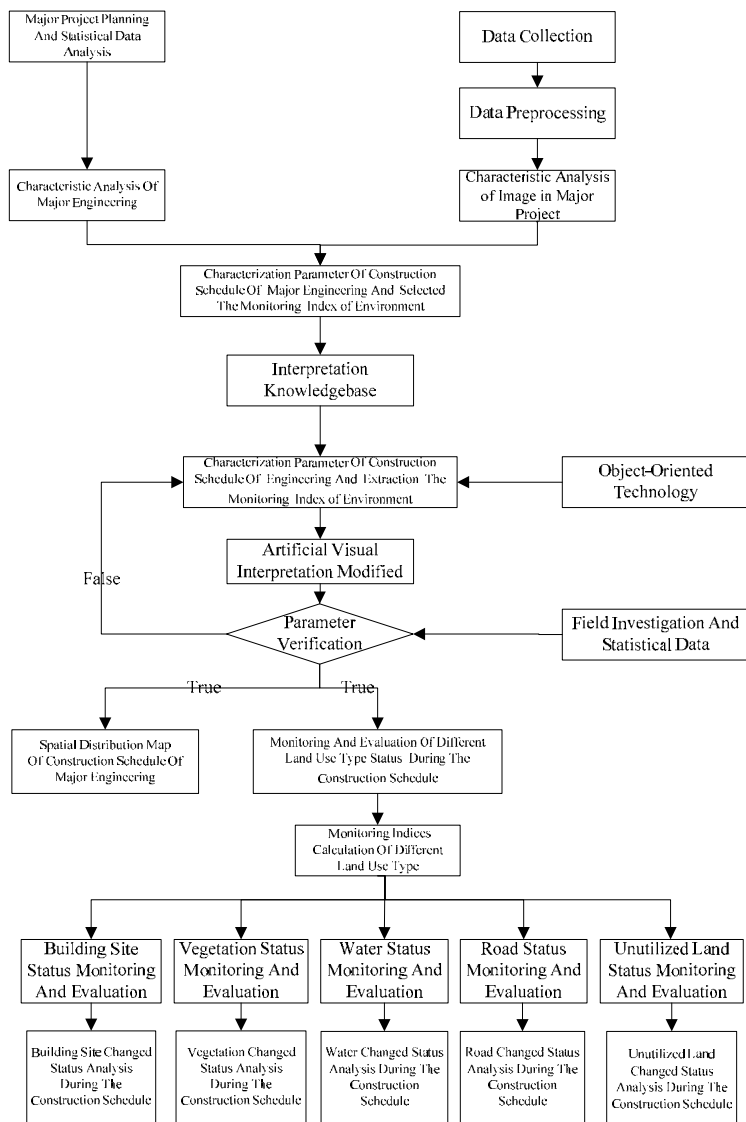


Fig. 2. Flow Chart of Major Project by Remote Sensing Monitoring

2.3 Ecological environment affected by major project and monitoring strategy of remote sensing

Currently, ecological damage caused by major projects of urban construction has been one of the main reasons of environmental degradation, and trends to serious. But the environmental damage and pollution causes mainly non-polluted ecological environmental impact, which is generally destruction of vegetation, destruction of partly landscape, soil erosion, impact of natural resources (land, grasslands, forests, wildlife, etc.), impact of landscape and the impact of interesting areas and so on(nature reserve, monuments, water conservation etc).

Stage	Environmental Problem	Manifestation
Early Stage	Change of Land Cover/Land Use and Decrease of Ecological Function	Requisition, Tree cutting, Green Space Occupied and Regeneration
Medium Stage	Ecological Damage	Animal and Plant Habitat Destruction, Vegetation Reduce, Water Area Reduce, Soil Erosion and So on
Later Stage	Improper Environment Measure	Slope Collapse, Protection Project Failure, Improper Green Way
	Management and Supervision of Environmental Engineering Maintenance	Protective Engineering, Maintenance Management Neglect, Poor Greening, Sabotage and So on

Table 1. The environmental problems existed in major projects of construction

Major construction projects include: point (stations, terminals and airports), polyline (Lines, pipelines and routes) and polygon (station area and project area). No matter which type of project, its object includes two types: the main project and ancillary project. Main project is the construction object of the project in accordance with project planning, such as the Beijing South Railway Station main building, etc; Ancillary project means engineering facilities which plan in order to improve or supplement the principal design features and construction, such as the station square, bus station, road and etc. Its major impact on the ecological environment refers to the problems arising by construction of access roads and camps. Therefore, during the schedule of construction, it is necessary to not only consider the influence to the ecological environment by the main project, but also consider the adverse effects on the surrounding environment by the ancillary project. As a result, engineering sidewalk alignment should avoid living areas as possible, sewage discharged into the sewage tank, and sidewalk trees and grass in order to greening, although it can increase the investment, it improves the construction environment.

The life cycle of major project construction mainly includes 4 stages: investigation, design, construction and operation. They are completely different periods of stage. So it should be monitoring and evaluation by stage, and discussing the impact on the ecological environment in various stages of the life cycle. Then the method of monitoring and evaluation content is then put forward. During the monitoring and evaluation, In addition to focusing on the eco-environmental impact, analysis should focus on the direct impact of the construction period and the corresponding environmental protection measures. At the same time, some aspects of design are ignored, such as the choice of site, line selection) and the management of the operation period. In particular, the land use regeneration after project construction cannot be ignored.

2.3.1 Investigation stage

Surrounding eco-environmental monitoring of investigation stage mainly include the environmental impact of ecological sensitive areas (nature Reserve, Scenic Area and wetlands etc), engineering spoil area and the topographic gradient of project along etc.

During the feasibility study of the investigation stage, environmental protection department should make environmental impact report. This can be confirmed through the key point of environmental protection and measures during various design stages, and make the appropriate engineering design.

For the main project, alignment should avoid the nature reserve, scenic area and wetlands etc. And it should collect local landscape characteristic and the planning information of the region.

2.3.2 Design stage

The design of the route should be according to the characteristics of project and the environmental geological condition of the project then take appropriate measures for ecological and environmental protection in order to prevent new pollution and ecological destruction, and protect resources and natural environment that human beings depend on.

For the main project, construction of spoil field must consider the ecological characteristic of the region, take appropriate and effective protective measure, and prevent further soil erosion. In ecological vulnerable region, major projects must follow the principle that avoid as possible, the construction site, sandstone yard must be considered repeatedly, in order to damage the vegetables as little as possible.

2.3.3 Construction stage

Major project during the construction stage is more complex and difficult. There are many issues to be considered; above all eco-environmental protection. The ecological environment affected by construction of major project is multifaceted, such as land resources and water pollution, change of flora and fauna community and important impact on the ecosystem.

2.3.4 Operation stage

Ecological environment in operation stage of project mainly include 2 parts: Positive effects and negative effects.

1. Positive effect

The project has 2 main positive effects. On the one hand, the temporary construction area will be planting grass and tree for ecological restoration or rehabilitation after the construction. On the other hand, project construction department will implement a comprehensive virescence project according to design specifications and requirements.

2. Negative effect

The project has 2 main negative effects too. On the one hand, the facilities and activity of project can change or disturb the environment of animal habitat. Because the project can change the animal channel and activity area. On the other hand, the entrance of a lot of people and vehicles can destroy local vegetation. This effect can reduce the biodiversity community, and change the vertical structure of communities. Long-term effect, it may lead to the cessation of community succession and even retrograde succession.

2.4 Analysis of project schedule characteristic

Case of research in this article is Beijing-Tianjin Inter-city Highspeed Railway. It is a major transportation project.

Beijing-Tianjin Inter-city Highspeed Railway is a typical project of polyline, whose railway station is a typical project of point, and the surrounding area of the railway station's ancillary facilities, including the railway station square, parking place, bus stop, etc, are a typical project of polygon. This kind of project is very easy to aggravate the development of geologic hazard problems, such as landslide, soil erosion, and even affect the safety of traspoting itself and the influence on the whole benefit.

Land use during construction include: permanent sites, temporary sites and unused land. Permanent land use refers to the area of roadbed, stations, bridges, tunnels and ancillary projects of transportation engineering. Temporary land refers to vehicle transport road, materials field, access roads of construction and area of construction during the period of construction. Unused land refers to the places which are being used in a certain period due to project planning, demolition, land acquisition or other construction reasons. But such land is not being used for permanent and temporary usage temporarily.

2.4.1 Data collection and scheduleing

According to this research needs, and the demonstrate application needs, we collect multi-source remote sensing data, and the engineering relevant statistical and planning data. Through data standardization and data scheduleing technologies, we deal with the collecting remote sensing data, in order to meet the inquirement of information extraction and monitoring applications.

We choose "BJ-1" satellite remote sensing data as primary data, and other multi-source remote sensing data as auxiliary to monitor the prior period, the middle and the last period. The data acquisition is as follows:

1. BJ-1 data

Considering the project's monitored phase and the small satellite launch services period, select satellite data of the project mid-and late-phase, as the following table 2:

Spatial extent	Type	Spatial resolution	Time	Use
Beijing region (Beijing South Railway Station)	BJ-1 multi-spectral	32m	Oct 2007	Data fusion
	BJ-1 Pan	4m	Oct 2007	Data fusion, Information extraction
	BJ-1 multi-spectral	32m	Sep 2008	Data fusion
	BJ-1 Pan	4m	Sep 2008	Data fusion, Information extraction

Table 2. BJ-1" satellite data information

2. Auxiliary data

Ancillary data provide references for the precise alignment of the different periods or different time to these satellite images, and they are benefit to train the image selection of classification schedule and verify the results, in addition, they can greatly reduce the amount of outside work, save time and money, and also very important to ensure that we can complete the project with high quality and on time.

We need to collect the necessary supporting data according to Beijing South Railway Station's construction followed by the table 3.

Data type	Spatial resolution or scale	Type	Time	Use
SPOT	2.5m	multi-spectral	May 2007	Assisted information extraction
QuickBird	0.6m	multi-spectral	May 2007	Assisted information extraction

Table 3. Auxiliary data

2.4.2 Standardized rules for data

1. Plane coordinate system

Datum: 1954 Beijing coordinate system

Projection: Gauss - Kruger projection

Striping mode: 6°

2. Height coordinate system

1956 Huanghai Height Datum

When topographic maps are Xi'an 1980 coordinates system and 1985 National Height Datum coordinates, we should convert the datum to Beijing 1954 coordinate system and the 1956 Huanghai Height Datum, 1:25 million and 1:10 million scale is 6° zoning.

3. Data Prescheduleing

Using remote sensing geographic information system software, such as ENVI and ARCGIS, to do geometric correction and image fusion.

Work steps: control point selection, correction, registration, image fusion.

2.5 Establish engineering schedule characterization of target system

In the construction schedule, we will inevitably take and split the farm land. Thus, we use these two ways to monitor the project's progress: first, through the area change of the project itself to reflect; second, through the monitor of the construction associated with the ancillary works and the surrounding land-use change to reflect.

Different time periods have diverse characteristics in remote sensing image, thus there will be different project type (main project, ancillary project), may lead to different projects exhibit the same characteristics, as they are from artificial cement structures, but, the same

project type may show different characteristics, as they have different progress (different cement hardened, different stages of progress), which gave a lot of confusing interference factors to the monitor progress.

So we need to build the engineering schedule of index system, combined the extract information from remote sensing images with monitor progress project.

2.5.1 Before the construction

As the project land acquisition, demolition, there will be a large continuing area of unused land or land that covered with a little vegetation, at the same time, as the project officer's presence, there will be appear construction wall, simple workshops and other architectural temporary site. Although there are construction activities, but they are not the main content to be monitored.

2.5.2 In the construction

Main building construction area is increasing, while the relevant ancillary construction is continued to be improved, a large number of temporary construction sites appeared (referring to road transport vehicles during the construction, materials, field, basement, construction of access roads, construction sites and barracks and other accounting ground). Unused land area is reduced. At the same time, as the project fill and cut directly destroys vegetation, changing the original shape, stacking a large number of spoil, and poor terrain conditions also produce soil erosion.

2.5.3 After completion

The project main building is no longer increase. A large number of temporary land and unused land will be substituted by ancillary works and ecological restoration project.

In summary, the remote sensing monitor character indicators of major projects in urban construction showed in the table 4 below.

Index	The meaning of indicators	Included in class	Monitoring methods
The main project site	South Station is the main project construction site. Through its area change to directly reflect the progress	Built-up areas	Object-oriented information retrieval and artificial visual interpretation and change detection techniques
Ancillary site works	Except the main project, supporting projects. Including engineering around the Plaza, road, bus stations and other engineering and construction areas	Built-up areas, road	Object-oriented information retrieval and artificial visual interpretation and change detection techniques

Index	The meaning of indicators	Included in class	Monitoring methods
Unused land	Project land acquisition, demolition. It through the different stage changes react the progress. One important indicator of completion.	Grassland, Woodland, Built-up areas	Object-oriented information retrieval and artificial visual interpretation and change detection techniques
Temporary sites	Refers to the period of motor transport road construction, materials field, base, construction of access roads, construction sites and barracks and other area. One important indicator of completion.	Built-up areas	Object-oriented information retrieval and artificial visual interpretation and change detection techniques

Table 4. Type of landuse

Thus, Beijing South Railway Station transportation project study area land use / land cover classification index system is in the following table 5.

Index	The meaning of indicators	Monitoring methods
Built-up areas	Including South Station main project of building land, land for ancillary works (works around the Plaza, road, bus stations and other projects) and unused land and other built-up area of land	Object-oriented information extraction technology
Road	The linear structures for temporary or permanent transportation function.	Object-oriented information extraction technology
Grassland	Refers to the growth of herbaceous plants, more than 5% coverage of the various types of grass, including animal husbandry, grassland and shrub dominated canopy density below 10% of the woodland grass.	Object-oriented information extraction technology
Woodland	Refers to the growth of trees, shrubs, bamboo and other forest land. Including woodland, shrub land, woodland and other woodlands.	Object-oriented information extraction technology
Water	Refers to the natural terrestrial waters and water-conservancy projects, including canals, reservoirs, ponds, coastal land and beaches.	Object-oriented information extraction technology

Table 5. Beijing South Railway Station landuse classification indicators

2.6 Establishment of interpret knowledge database

Interpret knowledge generalized various remote sensing characteristic during different stages of project, these include: hue, brightness, shape, texture, and spectrum. It provides

assisted support for major project schedule and extraction of surrounding ecological environment information. Extraction of major project use artificial and object-oriented methods. So interpret knowledge database has been built for these methods of information extraction.

Basic idea: We need to analyse the image characteristics from different data sources and consider the composition, structure and environment of major project, according to different characteristics of information in remote sensing image, the element's common features are studied during different time in high-resolution remote sensing image, such as geometric features, texture features, spectral information, spatial characteristics and characteristics. Then the remote sensing information database which is suitable to BJ-1, QuickBird, IKONOS and SPOT data should be constructed. The construction schedule is shown in Figure 3.

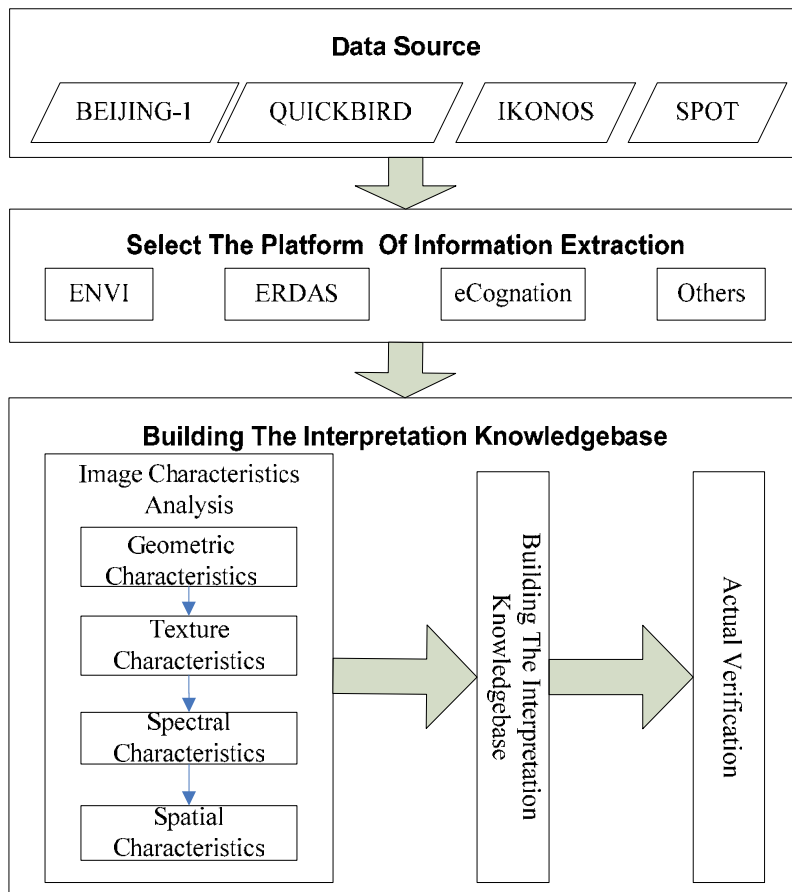


Fig. 3. Flow chart of interpret knowledge database of major project

As data source is different, the interpret knowledge database is different as well. This research is building interpret knowledge database focused on BJ-1, SPOT, QuickBird and TM data.

Interpretation marks for example shown in the following table 6.

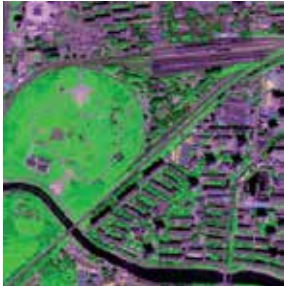


Type	The main project site of Beijing South Railway Station	
Image characteristic	Shape	Specific shape and external clearly boundary
	Hue	Purple or bright white
	Texture	Rough structure in mid-term project, uniformity structure in post project
Image type	BJ-1 4m fusion image, Quickbird multispectral image	
Sample Image		
	2005 year Quickbird (Before the construction) No texture	2007 year BJ-1 (In the construction) Rough texture
		
	2008 year BJ-1 (After the construction) Uniformity texture	
Description of interpretation	According to shape, hue and surrounding strong contrast of main project and ancillary project	

Table 6. Interpretation marks of main project

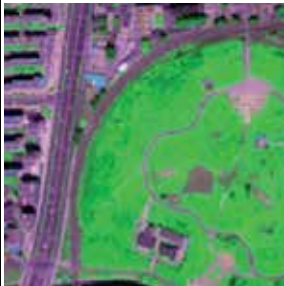

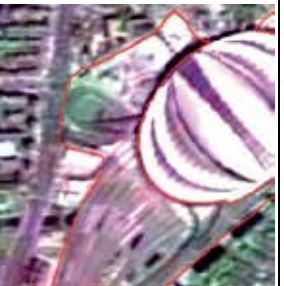
Type	Square, road and bus stop around the Beijing South Railway Station	
Image characteristic	Shape	Clearly geometric feature, regular shape
	Hue	Green, red and bright white
	Texture	Uniformity structure of image texture
Image type	BJ-1 4m fusion image, Quickbird multispectral image	
Sample Image		
	2005 year Quickbird (Before the construction) No texture	2007 year BJ-1 (In the construction) Rough texture
		
	2008 year BJ-1 (After the construction) Uniformity texture	
Description of interpretation	According to shape, hue to interpret	

Table 7. Interpretation marks of ancillary project




Type	Unused land		
Image characteristic	Shape	Irregular geometry and obscure boundary	
	Hue	Purple gray and dark color	
	Texture	Rough texture	
Image type	BJ-1 4m fusion image, Quickbird and SPOT multispectral image		
Sample Image			
	2005 year QuickBird (Before the construction)	2007 year SPOT (In the construction)	2008 year BJ-1 (After the construction)
	Description of interpretation		

Table 8. Interpretation marks of unused land



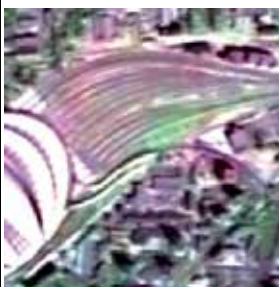
Type	Road of transportation, materials field, base and barrack		
Image characteristic	Shape	Irregular geometry and obscure boundary	
	Hue	Purple gray and dark color	
	texture	Rough texture	
Image type	BJ-1 4m fusion image, Quickbird multispectral image		
Sample Image			
	2005 year Quickbird (Before the construction)	2007 year BJ-1 (In the construction)	2008 year BJ-1 (After the construction)
	Description of interpretation		

Table 9. Interpretation marks of temporary land

2.7 Indicators extraction of project schedule characteristic

A remote sensing technology was used in order to extract the indicators of project schedule characteristic directly from the remote sensing image. Thus, we put forward an indicator extraction method of object-oriented project schedule and visual interpretation of artificial intervene. This method mainly uses remote sensing technology to extract the information of land-use and land-cover.

This method mainly includes two steps: 1. Monitoring indicator extraction of land-use and land-cover based on object-oriented technology. 2. Indicator extraction of major project schedule by human intervention. The key technical route is shown in Figure.

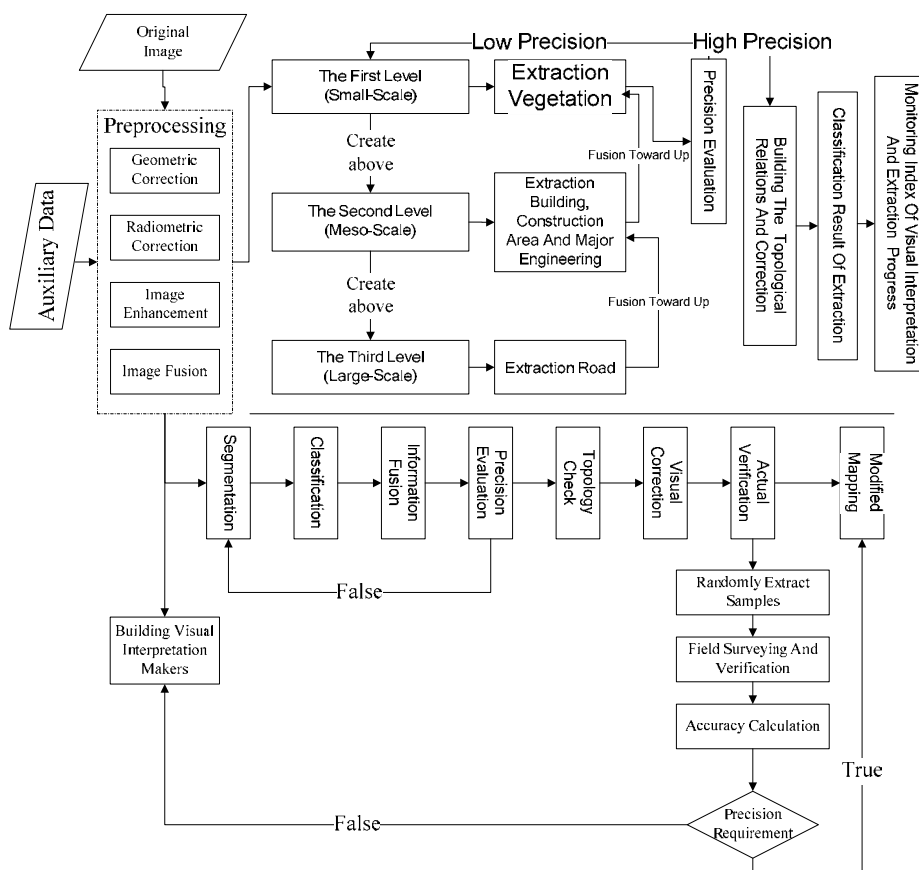


Fig. 4. Flow chart of the information extraction of major project

In this technical route, object-oriented information extraction is the key link. The study is based on the pixel's spectrum, shape and texture characteristics within the range of engineering research, compose to a single image object with all the similar characteristics of the pixels, and then, according to each object's spectrum and spatial characteristics, classify image object of the study area, extract the surface land use/covers information of engineering research area. The information extraction method procedure is as follows.

Based on this method procedure, we choose a mature object-oriented information extraction software package to extract the surface land use/land cover information; Then, we choose a mature GIS software platform to do more artificial work, such as merging and classification, to realize the extraction of the projects' progress characterization parameter.

2.7.1 Software platform choice

We take Ecognition software for example. Its object-oriented classification method basically has two kinds: the most neighboring method and member function method.

1. The nearest method.

It is similar to the supervid classification method, and we must choose samples to do image classification.

Advantages: operation is easy and intuitive, it does not need to summarize and distinguish these all kinds of rules, and it can quickly handle class hierarchy relationship;

Disadvantages: limiting the number of object information used in classification, for example, if the information is too much. It will affect the speed of classification, increase the information redundancy, and even can not use the context very well. The classification schedule is as the diagram shows.

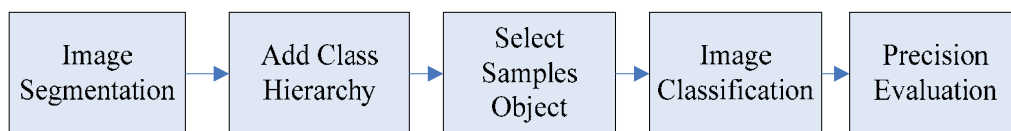


Fig. 5. Flow chart of the nearest method

2. Member function method.

It describes the class feature through membership (also called member function). Membership function is a fuzzy expression, it is a simple method which is used to convert any characteristic value to the range of [0, 1]. Use possibility to describe the belonging degree of the object to the class. The belonging value is usually between 0 and 1, 1 as completely belong to this category, and 0 as not. The size of the belonging value depends on the category description degree of the researching object.

This subject mainly use member function method to extract 2005 and 2007 QuickBird and SPOT data's object-oriented information of Beijing south railway station; After extraction of the classification, we can extract the progress of characterization parameter in a mature GIS software platform.

2.7.2 Project schedule characteristic extraction of Beijing South Railway Station in 2005

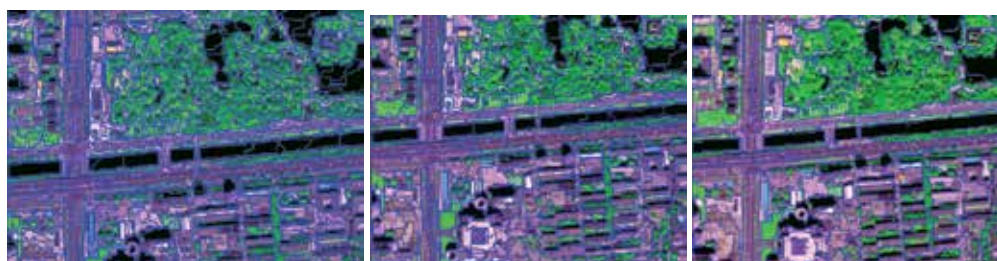
The data source is Quickbird image in 2005. Project schedule characteristic extraction of Beijing South Railway Station in 2005 is mainly includes 2 parts. One is land-use/land-cover information extraction by object-oriented of project study area in 2005. The other is project schedule characteristic extraction by human intervention.

1. Land-use/land-cover information extraction by object-oriented of project study area in 2005

Step 1. Image segmentation

The choice of split-scale size affects the size of the object to the image, named that it affects the accuracy of the information extraction. At the same time, the different split-scale can also make the different size and number of the object's polygon of the project. Through trial and error, we can obtain the appropriate division scale and its parameters of all levels, As follows:

The effect of different segmentation scale is shown in figure:



(a) Level1scale 10

(b) Level2 scale 20

(c) Level3 scale 50

Fig. 6. The effect of the three layers segmentation

Step 2. Classification

First of all,we introduce three abstract base class (lay1, lay2, lay3), using the single value in the hierarchy to define the relationship of inheritance to level1, level2 and level3 respectively, so that each class can inheritance a layer of the object.After the definition of inheritance, make the three classes associated with the three splited layers. Then extact the hierarchical information. To extact roads and water in the level3 (large scale), vegetation and building area in level2 (Mesoscale), and the vegetation will be further broken down into woodland and grassland in level1.

After lay3 inherited level3, it was associated with level3. On the base of lay3, using the length above 300 and the mean value of level3 between 100 and 200 to extract the road.Through observing the result of the classification, we found that there were non-road objects classified as road category, we use the tool “manual” provided by Ecognition to amend it.

Using the brightness which is below 50 and the standard deviation below 15 to extract water.This classification method also extract the shadow.Through trial and error, we have found tha there is no better way to completely remove the shadow. Therefore, we use the artificial intervention to remove the shadow. Through the relationship of opposite, make the other unclassified object extracted into other classes.

On the base of lay2, road 2 inherited the lay3's ,water 2 inherited the lay3's.On the base of the unclassified objects,using the brightness which was above 41 and the ratio of the layer2 was above 0.37 to extract the vegetation.Through the relationship of opposite,make the other unclassified object extracted into Built-up areas[2].

On the base of lay1, road 1 inherited lay2's, water1 inherited lay2's, vegetation 1 inherited lay2's, build-up 1 inherited lay2's. On the base of vegetation[1],using the standard deviation which was above 13.5 to extract the woodland,and through the relationship of oppsite,extracted the grassland in the land which was not woodland.

The extraction results are shown in table 11 and figure 8:




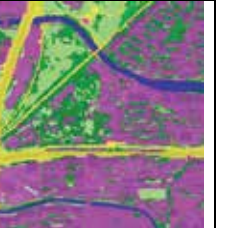
Extraction of Road	Extraction of Water	Extraction of Vegetation	Extraction of Woodland
			

Table 10. Extraction Result

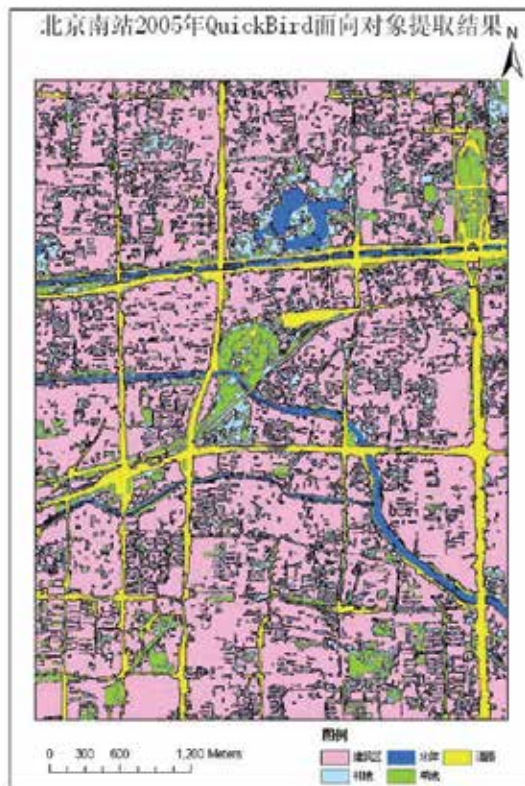


Fig. 7. Extraction result of Beijing South Railway Station by object-oriented in 2005

Step 3. Accuracy Assessment

We use pre-defined area tests the classification result. It is shown in figure 9.

User Class \ S.a.	道路[1]	水体[1]	建筑区[1]	耕地[1]	湿地[1]	Sum
Confusion Matrix						
道路[1]	29	0	1	0	0	30
水体[1]	0	21	0	0	0	21
建筑区[1]	0	0	20	2	0	22
耕地[1]	1	0	0	10	0	11
湿地[1]	0	0	0	11	12	23
unclassified	0	0	0	0	0	0
Sum	30	21	21	23	12	
Accuracy						
Producer	0.966667	1	0.952381	0.434782	1	
User	0.966667	1	0.909	0.909	0.521739	
Median	0.966667	1	0.902326	0.682353	0.687143	
Shot	0.954839	1	0.865652	0.416667	0.521739	
KIA Per Class	0.953673	1	0.94	0.37	1	
Totals						
Overall Accuracy	0.8598131					
KIA	0.824					

Fig. 8. Accuracy assessment result

Overall Accuracy is 0.8598131.KIA is 0.824.

2. Project schedule characteristic extraction by human intervention in 2005



Fig. 9. Extraction result by human intervention

Project schedule characteristic	Surface feature	Time	Area (km ²)
Main project land	Building	None	0
Ancillary project land	Building	None	0
Unused land	Grassland, Woodland and Building	None	0
Temporary land	Building	None	0

Table 11. Project schedule characteristic in 2005

Then we use the method of artificial visual interpretation to extract the project schedule characteristic from BJ-1 image in 2007 and 2008.

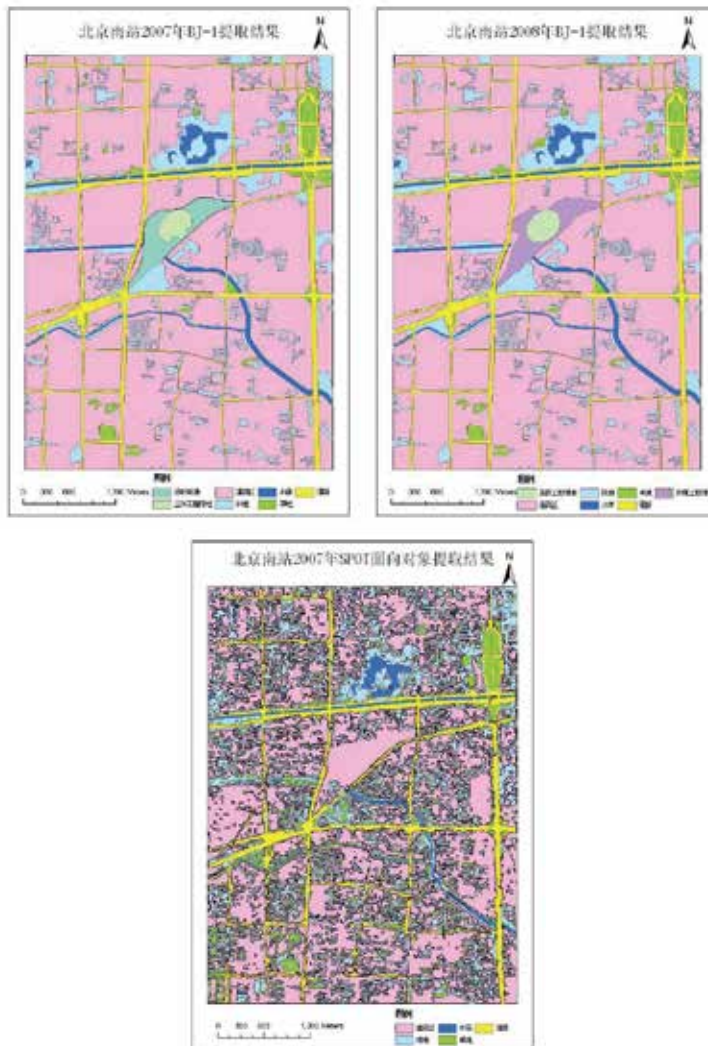


Fig. 10. Extraction result of Beijing South Railway Station by object-oriented in 2007

2.7.3 Progress analysis

Through the analysis and calculation with the parameters of the project, such as area, proportion and area changes from different stages, to achieve the process monitoring of the projects.

1. Main project

Main project land Proportion = Main project land area / All area × 100%

Time	Main project area	All area	proportion
2005	0	21.0338	0
2007 May	0.0718	21.0338	0.34%
2007 Oct	0.1309	21.0338	0.62%
2008	0.1392	21.0338	0.66%

Table 12. Main project land area and proportion from 2005 to 2008



(a)2005 (b)2007 May (c)2007 Oct (d) 2008

Fig. 11. Extraction result from 2005 to 2008

The main project is the main building area of Beijing South Railway Station. Through its area changes, it can directly reflect the process of the project. The project did not start in 2005. Its area was 0. To May 2007 of the project mid-term, the areas of main project were 0.0718km². The area of main project was 0.1309 Oct 2007. It goes to 0.1392 in 2008.

2. Ancillary project

Ancillary project land Proportion = Ancillary project land area / All area × 100%

Time	Ancillary project land area	All area	Proportion
2005	0	21.0338	0
2007 May	0	21.0338	0
2007 Oct	0	21.0338	0
2008	0.3488	21.0338	1.66%

Table 13. Ancillary project land area and proportion from 2005 to 2008



Fig. 12. Extraction result of ancillary project in 2008

Ancillary project is addition to the main project. It includes the square around main project, roads, bus stops and so on. The area of ancillary project is 0 in 2005. The area of ancillary project is also 0 till Oct 2007. In 2008, the deadline of project, the area is 0.3488 km², 1.66% of total research area.

3. Temporary land

Temporay land Proportion = Temporary land area / All area × 100%

Time	Temporary land area	All area	Proportion
2005	0	21.0338	0
2007 May	0.3263	21.0338	1.55%
2007 Oct	0.3585	21.0338	1.70%
2008	0	21.0338	0

Table 14. Temporary land area and proportion from 2005 to 2008



(a) Extraction result in 2007 May (b) Extraction result in 2007 Oct

Fig. 13. Extraction result of temporary land in 2007

Temporary land is the landuse of truck roads, base and so on during the project period. The area of temporary land is 0 in 2005, pre-project stage; the area of temporary land is 0.3263 km², 1.55% of total research area in May, 2007. The area increased by 0.3585 km², 1.70% of total research. In 2008, the deadline of project, there are no temporary land. It is the symbol of project completion.

4. Unused land

Unused land Proportion = Unused land area / All area × 100%

Time	Unused land area	All area	proportion
2005	0	21.0338	0
2007 May	0.0632	21.0338	0.30%
2007 Oct	0	21.0338	0
2008	0	21.0338	0

Table 15. Unused land area and proportion from 2005 to 2008



Fig. 14. Extraction result of unused land in 2007 May

Unused land is one of the key symbols of project completion. The area of unused land is 0 in 2005, pre-project stage; the area of temporary land is 0.0632 km², 0.3% of total research area in May, 2007. There are not temporary lands in deadline of project. It symbolizes the project completion.

2.8 Accuracy verification

Accuracy verification mainly consists of the determination of investigation mission, research method, accuracy assessment method and the revision of result.

2.8.1 Determination of the investigation mission

Obtaining samples are needed for building the interpretation marks of BJ-1 satellite.

Make sure that the accuracy and the precision of assessment classification for the construction condition patch of the transportation project. It includes design of field

surveyed route, determination of field sampling points, determination of indefinite patch, validity, type, location of the definite and variable patches. They add the missing patch which are monitored by remote sensing, ensuring the reliability of the remote sensing monitoring results.

The verification mainly towards the monitoring results of Beijing South Station Project's construction schedule. The finished project condition of the year 2008 is chosen to be tested in field.

2.8.2 Investigation methods

There are 3 forms of field investigation: checking with maps · consulting and field verification. It begins with checking the information of variable patches · index elements according to the map of present condition of land utilization and some other auxiliary materials; it requires consulting for patches which are hard to ascertain; finally, the field verification is used for those indefinite patches.

According to the monitoring results, both typical and indefinite areas of the project's schedule representative indices are chosen to set the sampling points. Finally, we get 17 sampling points. There are 2 main part of the project's verified points; 6 accessory project's verified points; 3 roads verified points; 1 grassland verified point; 3 construction land verified points. Field verified points cover the regions around.

In the schedule of implementing, each observation points should be located accurately by GPS, the project's construction progress, the start time, the state of landuse and other general materials should be recorded, digital camera is used to take at least 2~4 photos from each directions for different routes. According to the information collection results of different project's construction points, they are compared with the interpretive results and then verifying the accuracy of the extracted information in the important project areas and their surroundings.

2.8.3 The results of investigation

According to the record of sampling points' general materials in different project construction land, their distribution and schedule conditions are to be realized.

It is via field investigation to verify the accuracy of transportation projects' interpretive work. Both setting sampling points by GPS and recording their landuse types are necessary. And then they are compared with the interpretive results. The ratios of right ones and whole sampling points are exactly the verified accuracy results. The GPS and serial numbers are marked in the field verified map; the latter is ranked in the time sequence of verified routes.

The field relative recorded materials of Beijing South Station project are compared with the interpretive results, and then it comes to the accuracy assessment of Olympic venues' construction results.

The relative recorded materials through field investigation are compared with the interpretive results; the ratio of landuse typs which are consistent with the interpretive ones and whole sampling points is exactly the verified accuracy result. It is 74.19%.

Type	GPS Point	Measured area(m2)	Map area(m2)	Verify accuracy(%)	Error proportion(%)
Major project land	1, 7	137578	139157	0.989	0.011
Ancillary project land	5, 6, 9, 11, 13, 14	3546	3344.65	1.060	0.060
Road	12	1568	1529.87	1.025	0.025
Greenland	2	23880	0	0	0
Building	17	21406	20698.949	1.034	0.034

Table 16. Accuracy verification of Beijing South Railway Station

2.8.4 Revised results

The field relative recorded materials of Beijing South Station project are compared with the interpretive results, and then it comes to the accuracy assessment of Olympic venues' construction results.

The interpretive results are revised by field verified report. The Specific schedulees are shown in the figure 16.

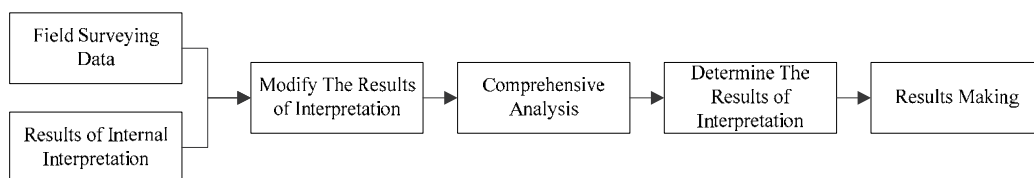


Fig. 16. Flow chart of revised interpret result

3. Summary

Evaluation of ecosystem has always been debated since last 60s. As a multiple system with nature, society, and economy, ecosystem impacted by multiple factors shows its complexity and nondeterminacy. This will bring a plenty of problems when we evaluate ecosystem comprehensively.

1. Among previous researches of ecosystem, the boundary between evaluation of environment assessment and ecosystem assessment was obscured, or mechanically combination of methods of different types in different ranges with different theoretical foundations is named as Eco environment method, which makes it difficult to improve and develop the eco environment method. To some degree, the credibility of ecological environment evaluation is decreased, which affects the conduct of sustainable development strategy.
2. Index systems of evaluating ecosystem should be perfected, and different scales of evaluation unit should be in different systems. Evaluation of ecosystem cannot exist without index system. In researches which are in different situations or inducted by different researchers, distribution of weight are in a large range, therefore this will lead to different results of evaluation.

3. Quantitative evaluation models of ecosystem should be improved. The current evaluation model of ecosystem is static models which focus on structure, function and status of ecosystem rather than the change procedure. Because of importance of ecosystem management, dynamic evaluation models of ecosystem are quite crucial work for the future.
4. Methods of evaluating ecosystem should be developed. Following the development of dynamic models, the problems we face are more complex and comprehensive. And research methods trend to quantitative with globalization and long- term of research object. Therefore, traditional statistics methods are not able to complete these kinds of tasks, and we need new technique to support evaluation of ecosystem.
5. Methods of obtaining data should be improved. In previous evaluation, some indices data were obtained through average of areas which reduced reliability of data and affected evaluation results negatively.

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Section 4

Social Sectors and Integration

When do People Protest? – Using a Game Theoretic Framework to Shed Light on the Relationship Between Repression and Protest in Hybrid and Autocratic Regimes

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1. Introduction

What is the relationship between different levels of coercion and popular protest activity in hybrid and autocratic regimes?¹ This is the question I want to address in this paper. An abundance of theoretical and empirical studies exists on whether state repression increases or decreases the incidence of domestic protest. However, findings have been mixed providing support for almost every possible relationship between protest and repression (e.g. Rasler 1996, Moore 1998, Carey 2006). The three dominant approaches are (1) the inverted U-hypothesis, (2) the backlash hypothesis, and (3) the non-linear hypothesis. The first perspective, the inverted U curve, argues that a shift toward lower levels of repression opens new opportunities for challengers to act collectively to demand their rights and to make claims against the state (Tarrow 1994). The second view, the so-called backlash hypothesis, is based on the opposite assumption contending that repression facilitates protest by nourishing a collective sense of defiance and intensifying organizational solidarity among diverse loosely connected movements (Meyer and Staggenborg 1996). A third array of studies claims that the relationship between coercion and protest might be more complex and more multi-dynamic than both the 'inverted-U' hypothesis and backlash assumption presume and advocate some sort of non-linear relationship (Kowalski and Hover 1992).

The three hypotheses have been tested in multiple settings and there is an abundance of empirical studies (e.g. Mason and Krane 1989, Opp and Ruehl 1990, Choi 1999) that support any of the three hypotheses. In this paper, I will show through a game-theoretic framework that these contradictory findings can and should be harmonized. Through a game of complete information I will reveal that both the hypothesis of an inverted U-shape and the backlash hypothesis result in equilibria with empirical referents.

¹ In this paper, I will discuss how protest can emerge under harsh and medium repression in a non-democratic framework. All scholars that are cited in this paper, exclusively focus on hybrid regimes and non democracies. Under democracy, repression should be small to non-existent, which renders protest less conditional of the degree of repression in a country.

The chapter will adopt the following structure. Section two will review the literature on protest and coercion by presenting the competing hypothesis; (1) the inverted U-relationship, (2) the backlash relationship, and (3) the non-linear hypotheses. Section three will present and explain the game of complete information. This part of the paper will also present and discuss the different equilibria and assign them to either the backlash theory or the hypothesis of an inverted U-curve. Finally section four will summarize the main findings of this paper and will provide some avenues for future research.

2. Review of the literature

The hypothesis of an inverted-U relationship implies that any state moving from middle or especially from high coercion to midrange to low coercion would confront a substantial rise in protest. For example, Kitschelt (1985: 300) argues that very open systems convert movements into pressure groups and very closed systems crush them. In his view, moderately intransigent systems are most conducive to high mobilization because they neither include the protesters nor destroy their movement. According to this perspective, a shift toward lower levels of repression opens new opportunities for challengers to act collectively to demand their rights and make claims against the state. Tarrow (1994) posits that especially when the state becomes unable to repress and thus becomes politically vulnerable, movements' organizations' opportunities to achieve goals increase. Conversely intense repression not only dissuades potential adherents from risking collective action but also deprives organizations of resources (Tilly 1978). A number of empirical studies including Olzak, Baesley and Olivier's (2002) analysis of collective action in South Africa indeed finds that severe levels of repression decreases collective action while medium levels escalate it. Their study suggests that on the one hand, anti-apartheid protests in South Africa between 1970 and 1985 intensified when the government showed signs of weakness and passed reform bills. Reversely, Olzak, Baesley and Olivier (2002) claim that periods of state repression dampened protest. Muller's and Weede's (1990) analysis also triggers support for this inverted U-relationship in a large-sample, cross-national test with political deaths as the indicator for political violence. Finally, Opp (1994) used data from interviews to test and confirm the inverted-U hypothesis for protests that occurred prior to the fall of the Berlin Wall in the former German Democratic Republic.

However, in other studies, the "inverted U" hypothesis receives less support than its "backlash" alternative, that is, that dissidents react strongly to extremely harsh coercion. In this view, repression leads to more protest by nourishing a feeling of collective solidarity among protesters and prospective protesters (Marks 1989 and Brockett 1995). According to Meyer and Staggenburg (1996) movement militancy intensifies when members encounter opposition. Mason and Krane (1989) advance a similar argument, contending that extremely harsh coercion might reduce protest temporarily, but would likely increase dissidence in the long run, in particular, when it is applied indiscriminately. In line with Mason and Krane, Opp and Ruehl (1990: 521-27) claim that the direct negative effect of repression on protest can be reversed if repression leads to micro-mobilization processes, which raise incentives for protest. These processes are facilitated if people perceive the repression to be illegitimate and if there is an organizational structure for protest activity in place (White 1989).

Empirical examples of the backlash hypothesis are South Korea, Argentina and the West Bank. In South Korea, during the famous Kwangju People's Uprising in 1980, paratroopers employed atrocious violence to break up the student demonstrations. This violence led to solidarity of fellow community members. In the end the entire citizenry united to resist the onslaught of the paratroopers against demonstrators and was able to rise up and fight off an elite force of three SWC brigades, which amounted to three-thousand Republic of Korea paratroopers (Choi, 1999). In Argentina tens of thousands of people were tortured, abducted, and murdered by their own government in the 1970s and 1980s. This cruelty spurred major protests; first by those that were directly affected by the junta's cruelty and human rights violations. Second these protests diffused in society, and led to a dramatic process of transformation from a "culture of fear" to a "culture of solidarity" which promoted the democratization of society (Brysk 1994). Finally, Khawaja (1993) and Francesco (1995) find evidence that protest spiked under extremely harsh repression during the 1980s and the 1990s in the West Bank. In particular, Francesco's study of the first Intifada highlights that Palestinians continued to protest under extremely harsh conditions (this coercion consisted of killing protesters).

Attempting to shed some lights on these opposite findings, scholars have tried to specify some circumstances under which either of the two hypotheses applies. Gurr and Lichbach (1986) purport that only consistent policies of state repression might decrease protest activity. In contrast, a mixture of increased repression and renewed concessions might have the opposite effect. Other scholars (e.g. Marwell and Olivier 1993 and Oberschall 1994) adhere to so called bandwagon models, critical threshold models, or models of critical mass to explain the interaction between dissidents' responses and government repression. These models describe a chain reaction in which small numbers of people trigger the participation of larger numbers of people over time, suggesting that once a certain, usually unspecified, threshold of number of participants is crossed, the costs of mobilizing a larger crowd decline. In such a scenario, more people are likely to join because they feel encouraged by the protesters' commitment and willingness to dissent. Because this mobilization puts enormous pressures on leaders to reduce dissent quickly, they are likely to adopt conciliatory policies. The result is more dissent because successful collective action sustains the involvement of old participants while convincing sideliners of the usefulness of protest (Chong 1991: 116-125).

Other scholars (e.g. Tarrow 1989a, 1989b) attribute special importance toward the timing of repression within a protest cycle.² The essential argument is this: when the concept of the protest cycle is wedded to state violence, harsh repression will only provoke further popular mobilization during the ascendant phase. In contrast, indiscriminate state oppression will deter popular collective action under normal conditions that is prior to the onset of a protest cycle. The same logic applies for the descendant phase of a protest cycle; harsh state violence

² Protest cycles begin when the structure of opportunity turns more favorable, encouraging groups to act on long-standing grievances and or newly created ones. The activity of these early mobilizers then encourages other groups or movements to activate as well. As a result, conflict diffuses throughout society at higher than normal levels of frequency and intensity. This activity builds peaks and then declines to normal levels (Tarrow 1983: 38-39).

can bring protest to an abrupt end. Nonetheless, Brockett (1993: 475) contends that when elites are willing and capable to institute widespread killings on a sustained basis, they are often successful in ending the protest cycle (even in its ascending phase) and terrorizing the population back into political passivity.

In another study, Mason and Kray (1989, 177) give explicit attention to the ways in which differing mixes of benefits and sanctions (from both the government and the opposition) affect the political preferences and behavioral choices of the masses. They argue that the distribution of mass support, opposition and apathy toward the regime will vary depending on the targeting strategy employed by a regime's repressive activities. The regime violence might be directed (1) just against leaders of opposition organizations, (2) against the rank and file membership of opposing organizations, or indiscriminately at the public regardless of its involvement with the opposition. Violence targeted against just the opposition is postulated to reduce the willingness of non-elites to actively support the opposition. If opposition leaders are imprisoned or murdered non-elites begin to doubt whether opposition organizations can deliver collective goods and rather abstain from joining the opposition struggle against the regime. According to Mason and Krane (1989: 180), similar outcomes are to be expected if the regime targets not only leaders, but also rank and file supporters of the opposition; now the inactive masses are all the more likely to remain uninvolved because fear has been added to futility. However, Mason (1989) argues that this targeting strategy will have the opposite effect on non-elites who already support the opposition. Being inactive would probably not remove them from being at risk. As a result, sympathizers of the opposition are likely to shift to more protest and possibly more violent forms of collective action. Finally, Nam's (2006) analysis of pro-democratic protests in South Korea in the 1980s and 1990s uncovers variation in the dynamics of state coercion and protest according to types of dissident groups. Of the groups assessed, workers were particularly active in protest. Farmers were the least active, and the Korean regime responded with the least repressive approach toward them.

The above-mentioned studies hint that the relationship between coercion and protest might be more complex and more multi-dynamic than both the 'inverted-U' hypothesis and backlash assumption presume and advocate some sort of non-linear relationship. As Hoover and Kowaleski (1992) argue it seems plausible that different situations produce different relationships between protest and coercion. In a case study on Iran, Rasler (1996: 149) comes to an analogous conclusion claiming that there are important reciprocal relationships among concessions, strikes, and spatial diffusion that suggest an interactive link between government and non-government actors (149). Trying to model this complexity Tsebelis and Sprague (1989) present the dynamics of a nonlinear (predator-prey) model under the hypothesis that the relationship between protest and coercion oscillates (pp. 551-52). Their model is motivated by an interest in understanding the sequential response of states to dissident activity. That is the model poses the two questions: if dissidents protest what will the state do next? Vice versa what will the state do if dissidents are cooperative? Under this predator prey model the re- action of both state and dissenters depends on the most recent behavior of the state (accommodation or repression) and the dissenters' responses. The model produces the hypothesis that states substitute repression for accommodation and vice versa, in response to dissident protest (Francesco 1996, Moore 2000).

The above review of the literature shed some light on the complex interaction between protest and repression. Depending on, for instance, the type of repression and its consistency, on whether the aims of the movement are revolutionary or reformatory, instrumental or identity oriented, repression may sometimes succeed in intimidating protesters, whereas at other times it may activate them. In order to answer the question why regime violence smothers popular mobilization under some circumstances, whereas at other times, similar or even greater levels of violence by the state will provoke mass collective action rather than pacify the target population, it is necessary to clearly lay down the conditions under which each of the two hypotheses applies (Carey 2006). Through a game theoretic model, I will show (temporary) equilibria, which will result in protest. These empirically relevant equilibria underline the conditions under which each of the two theories is valid.

3. The game theoretic model³

I will start the discussion of the game theoretic model by laying out the assumptions and the building blocks of the game. There are two unitary actors, the state and the protesters. Nature decides whether the government is strong⁴ or weak⁵. No matter whether it is strong or weak, the government makes the first move in the model by determining the degree of repression.⁶ It can either decide to repress strongly⁷ or it can opt for moderate degrees of repression⁸. Contingent on whether the government is strong or not and on whether or not the government engages in high or moderate degrees of repression the protestors can decide to protest or not to protest.⁹

³ I assume that protesters know whether they are confronted with a strong or a weak government, which means that they recognize on which side of the tree they are. In reality, it is plausible that in many situations civil society knows through the media, leaks in the government, foreign sources or good networking how strong and determined the government is to quell possible protest. In such a scenario it is sufficient to evaluate one side of the tree, because citizens act under complete information. They calculate the costs and benefits of protesting, compare them to the status quo and if their expected utility of protesting minus the expected costs of protesting is greater than the status quo then they protest.

⁴ A strong government is characterized by government coherence and considerable governmental resources to quell protest and punish and oppress the protesters

⁵ A weak state or weak government is characterized by splits within the government and/or between the government and the military complex. A government is also characterized as weak if it has few resources to effectively fence off protest

⁶ I have the government move first because both inverted U-relationship and the backlash relationship explicitly see protest as a reaction to state repression

⁷ High degrees of repression are characterized by extensive political imprisonment of a considerable number of the population. Murders disappearances and torture are a common part of life. Generally, the leaders place no limits on the means of thoroughness with which they pursue personal or ideological goals.

⁸ Moderate degrees of repression are characterized by restrictions of personal and political freedoms. Regime brutality and arbitrary imprisonment occur, but not on a large scale basis. The human rights violations are also not as flagrant as in a regime that engages in harsh repression.

⁹ I refer to protesters quite loosely. In some cases, they include the entire citizenry, while in other cases they include one subset of the population of a country. The group against which repression is directed can also be one region, or religious group.

This simple logic provides 8 possible outcomes:

- Strong government:
 1. Government represses harshly and people protest
 2. Government represses harshly and people do not protest
 3. Government represses moderately and people protest
 4. Government represses moderately and people do not protest
- Weak government:
 1. Government represses harshly and people protest
 2. Government represses harshly and people do not protest
 3. Government represses moderately and people protest
 4. Government represses moderately and people do not protest

Each of the eight outcomes triggers certain payoffs for the state and the protesters. The regime is best off under harsh repression. In this scenario, those in power have more control and can push through their ideological and political convictions without restraint. In contrast, under medium repression the government is somewhat restricted in its maneuverability and cannot implement its agenda unconditionally, as some, albeit few, checks and balances exist and people have some rights. I denote the benefits for the government derived from harsh repression with $B(HR)$ and benefits derived from medium repression with $B(MR)$. ($B(HR) > B(MR)$).

The government must not only calculate the benefits of repression, it must also calculate the likely costs under the possible scenario of protest. These costs, which are labeled $K(S)$ if the government is strong and $K(W)$ if the government is weak, involve the costs of repressing the protestors in case of collective action. Due to its increased military capabilities, government coherence and monetary resources, we can assume that the costs of repressing are lower for a strong government than they are for a weak government ($K(W) > K(S)$). The government is also faced with a final set of costs, the opportunity costs for high repression. Continuous levels of high repression involve a high degree of monetary and personal resources, which the government has to spend. Opportunity costs can also be reputational and economic, as other states might isolate the regime or stop trading with the country as a result of harsh repression. Thus, at least in the medium or long term, opportunity costs may harm the regime rendering it hard for those in power to sustain these costs over a long period of time. I label the opportunity costs OC . Similar to the protracted costs of putting down a rebellion; the opportunity costs of harsh repression are higher when the state is weak than when the state is strong. $OC(W) > OC(S)$.¹⁰

The protesters, as the second actor, face costs and benefits from protesting, as well. I denote the expected utility of protesting by E and the costs by C . The expected utility can be derived from the expected individual and group benefits. Individual rewards can be tied to some political or social benefit (more economic or political rights, higher wages or more social benefits) that the individual hopes to reap through protesting. Group benefits are linked to some benefit a deprived group might gain (e.g. more political representation or an end of discrimination against a certain ethnic group or region) (Lichbach 1994). Protest activity can

¹⁰ Despite the fact that opportunity costs are present for both medium and high degrees of repression, I only include the term when the state represses highly, because these costs will be higher then.

also be pushed by peoples' conviction that group action can be successful and from beliefs that their own participation may trigger subsequent participation from more people in collective protest activities (Gamson 1992).

With regard to the protesters' calculation of benefits we can reasonably assume that they can derive higher gains from protesting under more repression. In a situation, where the government indiscriminately represses, citizens are often tortured and discriminated against; a scenario which renders it very appealing for people to try to get rid of the regime. In contrast, under medium or lower degrees of repression, citizens have some rights and normally do not have to fear for their lives. This not only signifies that they can gain less through protest; it also means that they can lose the few rights they possess if the protests fail. Based on this rational, I assume that the expected utility from (successful) protests E is higher under harsh repression $E(HR)$ than under lower degrees of repression $E(MR)$. ($E(HR) > E(MR)$)

However, people also face serious costs (C) from protesting. These costs include personal expenses such as the time and money individuals have to devote to protesting and more importantly possible costs that the regime might inflict on the protesters (e.g. death, imprisonment, torture and losing one's job). Organizations and associations also play a role in determining the costs and benefits of protesting. Well developed organizations and networks might decrease the costs of participation for individuals by providing protection against arbitrary or cruel state action. Networks can also supply protesters with resources or they can simply facilitate collective action (e.g. McAdam and Paulson 1993, Opp and Gern 1993, Oegema and Klandermans 1994).

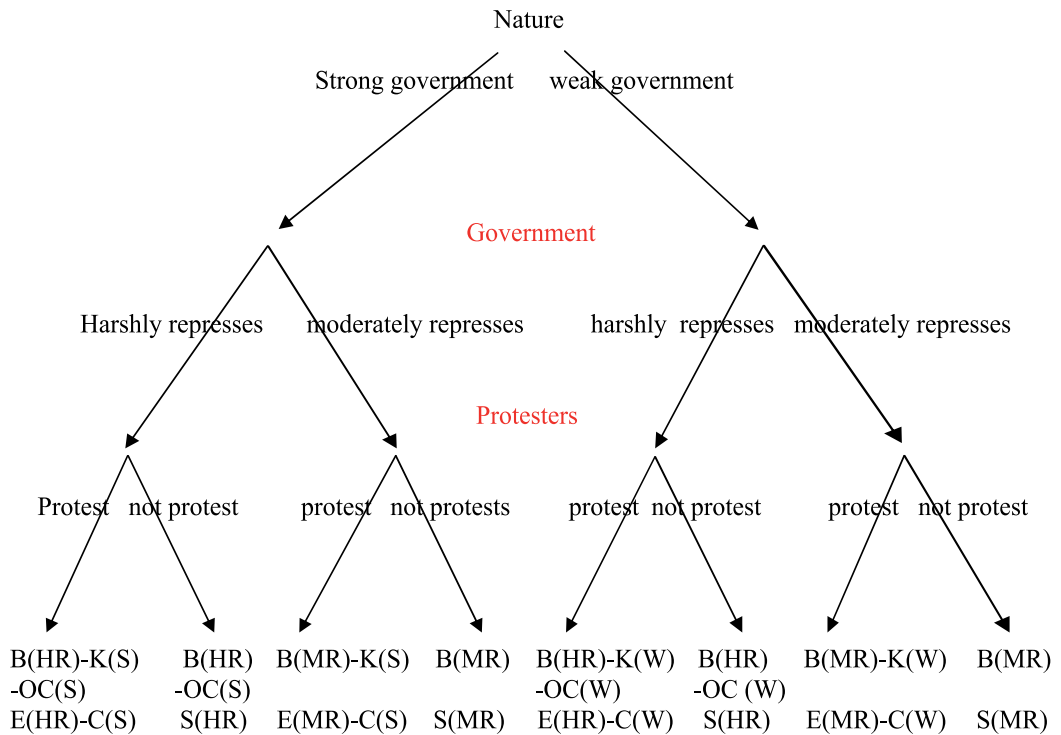
The costs of protesting are higher when the government is strong. Protesters know that a strong government has the monetary and logistic resources to quell any revolt or demonstration. They also know that the government might inflict harsh punishment upon them, if they dared to rise. In contrast, if civil society actors know that the government is weak, they can hope that those in power are somewhat restrained in their ability to push down the protesters. Those that weigh the pros and cons of protesting also know that a weak government might not be certain of the loyalty of the police and armed forces. In such a situation, civil society actors might also be aware that a forceful reaction might overstretch the resources and/or create (further) rifts within the regime. Finally, protesters may recognize that a weak government is vulnerable to outside intervention. All these factors make protest action less scary when the government is weak. This gives us the following calculation $C(S) > C(W)$.

For the protesters there is a last component, which they have to take into their consideration before deciding on action. They have to compare the cost benefit ratio of protesting to their status quo. They will protest if overall they think, that despite the high costs of protesting they would gain more through collective action than they have at the status quo. The status quo is denoted by S . I assume that under harsh conditions the status quo is worse and involves more sacrifices and suffering than under medium degrees of repression. Thus $S(HR) > S(MR)$.

4. Possible equilibria

So far, I have created the game tree and established the payoff structure. No matter on which of the two sides of the tree the regime is, it has two choices; it can either harshly or moderately repress. The protesters response is conditional on the governments' initial

choice. Confronted with harsh/ moderate repression civil society actors can either protest or not protest. In order to proceed from this point on and in order to calculate equilibria, I have to specify some further conditions. In this section, I will calculate all equilibria which result in protest and assign them to one of the theories.¹¹ I will proceed in the calculation of the equilibria from the left side of the tree to the right side of the tree.¹²



- B(HR)>B(MR)
- K(W) > K(S)
- OC(HR)>OC(W)
- E(HR)>E(MR)
- C(S) > C(W)
- S(MR)>S(HR)

Table 1. The Game Tree

The first equilibrium supports the backlash hypothesis. The equilibrium pertains when a strong regime represses hard and civil society actors protest. Under this scenario, player one, the regime, would gain more from hard and repressive policies than it would from

¹¹ All the equilibria that I calculate are temporary. A change in either the opportunity costs and/or the protracted costs of fighting back the protesters can lead the government to opt for different degrees of repression. The same applies to the protesters, if they feel that either the benefits or the costs of protesting change, they might alter their strategies and actions.

¹² There are also four possible equilibria where civil society actors abstain from protesting. In these four cases the status quo, however bad it is, is still preferable than engagement.

moderate repression. This gives us the following equation: $(B(HR)-K(S)-OC(S)) + (B(HR)-OC(S)) > (B(MR)-K(S))+B(MR)$. For the second player, the protesters, the expected utility of protesting under harsh conditions minus the expected costs of collective action must be higher than the status quo $(E(HR)-C(S)) > S(HR)$. On the regime's side, this scenario often applies when the opportunity costs are low and when the government has a strong military and security apparatus. On the side of the protesters, it is safe to assume that they must be very desperate and infuriated; otherwise they would not dare to rise against a strong state.

Some recent empirical examples that confirm this equilibrium can be found in Eastern Asia. For example, the recent protests of the Tibetan monks fit this scenario. China has perpetually opted for hard repression and denies any quest for autonomy to the Tibetan people. By continuously suppressing the population and the monks, in particular, China aims at maintaining its territorial integrity, its ideology and attempts to prevent other regions and/or religions from rising. For China the benefits of oppression are high and the opportunity costs are relatively low. China has the military power to maintain an iron grip on Tibet. Due to its importance as an international trading partner, it also hopes that despite its human rights violations it would not suffer from severe blows in its relations with foreign countries. For the monks on the other side, the potential benefits of protesting could be high. Being deprived of personal and group rights and restricted in practicing their religion, they have a lot to gain from protesting. Even if action right now, might not lead to more autonomy and greater freedoms, collective action can at least increase the opportunity costs of the regime. The monks' protests can attract foreign attention (e.g. from human rights groups), and might increase the costs for the government to maintain law and order and they might pave the way for future protests. Another example, where extremely harsh coercion led to manifestations were the 2007 anti government manifestations in Burma, again led by Buddhist monks. In general, protests events under a harsh repressive state normally do not turn into a civil war, but rather remain quite contained because the government is strong and has the power to repress the protesters efficiently.

The second scenario that can lead to protest is theoretically possible, but empirically rare, if not non-existent. It consists of a situation where the regime is strong but nevertheless only opts for medium degrees of repression. Under this scenario the regime would calculate its costs and benefits as follows: $(B(MR)-K(S)+B(MR)) > (B(HR)-K(S)-OC(S)) + (B(HR)-OC(S))$. For the government this calculation makes sense under two scenarios: First the regime might opt of medium repression, when the benefits from harsh repression are only marginally higher than the benefits from lower degrees of repression. Second, when the opportunity costs for strong repression are extremely severe, it might be a sound choice for those in power not repress to indiscriminately. Under a situation where the government is strong, but abstains from harsh repression, civil society actors protest if $E(MR)-C(S) > S(MR)$. This situation should be extremely rare because the protestors have comparatively little to gain, as they know that the regime is capable of crushing them. They also know that if their revolt is pushed down the regime might renege on all or some of the few benefits. Thus, if a strong regime decides not repress too severely, civil society actors are frequently better off by not rising. The example of Singapore and other Asian tigers, which are characterized by medium degrees of repression and high stability, underlines this point.

The third equilibrium, which also supports the backlash hypothesis, prevails when the government is weak, but despite its weakness chooses to repress harshly. This situation

applies under the following scenario $B(HR)-K(W)-OC(W)+B(HR)-OC(W) > B(MR)-K(W)$. Confronted with a weak and repressive government, civil society actors decide to protest if E is $(HR)-C(W) > S(HR)$. For this equilibrium to be valid the government must considerably gain from high repression. First, these gains can be monetary in that the government can extract certain natural resources from a region. Second, these gains can also be ideological in that they allow one religious or ethnic group to dominate the political and social life. Confronted with a weak government that harshly suppresses, the oppressed people or groups have a comparatively high tendency to resist and protest. They know that the state is weak and are aware that the government might not sustain perpetual challenges.

Empirical examples of this situation, which follow the backlash hypotheses, are multifold. Protests in such a scenario are often violent and turn into civil wars. It is often unclear, who prevails in these violent conflict, the regime or the protesters. A situation where a repressive regime prevailed was the Kurdish uprising against the repressive Iraqi government. The ruthless oppression of the Kurds by Saddam Hussein's regime provided incentives for these tribes to rise and fight for autonomy once they perceived a slight weakness in the regime. In 1991, after the first Gulf War these tribes saw the possibility for a successful upheaval and took up their arms. However, they were defeated by the Iraqi army in a very cruel way.

Sudan is another example, where a weak repressive state has been confronted with protest. However, contrary to the Iraq protests, the oppression of the non-Arab populations in the south by the Arab dominated government of the North, has led to perpetual conflict since 1983. In Sudan, the relatively weak government or government-related forces have not only repressed minorities, but have also engaged in atrocities and human rights violations for economic and ethnic reasons, thus spurring violence. This spiraling of protests and stronger repressions has led to a situation, where the government lost control over some parts of the country and has been unable of keeping up the order. In Sudan, as in other states including Somalia, the interaction between a weak state, high degrees of repression and protests have led to failed states.

Under a third scenario, protests against a weak, but strongly repressive regime can lead to a successful revolution. In such a situation the protesters prevail against the weak repressive government. An empirical example of this case would be the February Revolution in Russia in 1917. Weakened by World War I and confronted with a ruthless economic crisis (e.g. a severe famine), Tsar Nicolas II continued his autocratic and repressive rule. This infuriated large segments of the population and broke the loyalty of many civil servants including police and military officers. The Tsar was finally overthrown by massive protests, which he was unable to quell.

The last equilibrium that leads to protest happens when the government is weak and moderately represses and the civil society actors protest despite merely moderate degrees of repression. This scenario, which confirms the hypothesis of the inverted U-curve, occurs when the regime is better off by weak repression than by strong repression ($B(MR)-K(W)+B(MR) > (B(HR)-K(W)-OC(W)+B(HR)-OC(W))$). The protesters will turn out and engage in collective action if the expected utilities from protesting minus the costs from protesting are higher than the status quo: $(E(MR)-C(W)) > S(MR)$. This equilibrium is quite a common scenario because under some circumstances, a weak regime might be forced to lower its levels of repression. Reasons can be financial problems, impending sanctions or military interventions, a lack of qualified spies and supervisors, economic needs and reputational costs. If any or several of

these scenarios apply the regime is often forced to make concessions by decreasing its degree of repression. In this regard, a decrease of oppression is often a means of preventing protest actions from happening (e.g. with more rights the benefits for protesting decline). In some cases this rational might play out and regimes can in fact prevent protests from occurring. However, in other cases, the benefits are too marginal to fundamentally change the cost benefit ratio of the possible protesters. Despite being granted some rights, civil society actors might still opt for protests, because they think that they can gain much more than the few rights that the government granted them.

Thus, this last equilibrium describes a situation under which the inverted U-curve applies. There are many empirical examples in which protests follow this last equilibrium. Very relevant and important are probably the protests that preceded the collapse of the Soviet Union and the fall of the Berlin Wall. Shattered by an economic crisis and incapable of keeping up the arms race with the United States the leadership in Moscow and the dictators of the satellite states could not uphold high degrees of repression any more. In the 1980s, people in Eastern Germany and elsewhere in the Eastern Bloc could critique the government; they could watch Western television and political prisoners could be bailed out by Western governments, most notably Western Germany. However, these concessions were not enough to appease the people. Confronted with a weakened state, civil society actors saw the change of gaining complete political and economic freedoms. This appeal minus the anticipated costs for protesting outweighed the status quo benefits and people turned out in larger and larger numbers. For those in power the costs of pushing down the protests became too costly and they finally had to step down, first in Hungary and Germany and then in all the other former Eastern countries.

Aside from the protests that brought down the Iron curtain, the recent protests in Thailand in 2006 and Pakistan in 2008, which both resulted in the abduction of the leaders (Thaksin in Thailand and Musharraf in Pakistan) are examples of situations where the inverted U-curve applies. These three examples nicely reveal that protests under a weak and moderately repressive government often lead to reform or the overthrow of the regime.

5. Conclusions

Through a game theoretic framework I have shown the conditions under which both the inverted U relationship and the backlash hypothesis frequently occur. The inverted U-relationship applies when a weak regime engages in moderate degrees of repression and the civil society actors decide to protest. In many cases, these protests further weaken the government and trigger an overthrow of the regime. The backlash hypothesis prevails under two scenarios. Under the first scenario, the government is strong and represses harshly and civil society actors protest despite the strength of the government. As the examples of China and Burma reveal, these protests are often violently quelled and trigger subsequent periods of relative calm. Under the second scenario, the government represses harshly despite being weak. This scenario can lead to very volatile situations because the protesters have a lot to gain from protesting and the government has a lot to lose. Such a situation might spur protests and violent reactions, which can easily spiral into a civil war. The empirical examples of Sudan, Somalia, or the Democratic Republic of Congo fit this scheme.

Thus, protest can occur under three scenarios. None of these equilibria explains the repression protest nexus in all or the majority of the cases. Yet, each equilibrium has empirical referents

and explains some events of protest action. Which of the two theories actually holds depends on the dynamic cost-benefit calculation of both actors – the state and civil society actors. As I have shown in this paper, this calculation depends on a plethora of factors. Based on the benefits of repression, the possible costs of pushing down protests and the opportunity costs of high repression, the regime determines its degree of repression. Depending on their expected utility from protesting, the expected costs of protesting and status quo, civil society actors then decide whether or not to turn out. To determine which of the two hypotheses apply, it is necessary for researchers to establish the conditions on the ground. Only with on the ground knowledge can scholars predict which of the two approaches applies but as the situation on the ground changes, so might the behavioral strategy of the actors.

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Embracing Intersectional Analysis: The Legacy of Anglo European Feminist Theory to Social Sciences-Humanities

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1. Introduction

During the past forty years, Gender/Women's Studies has developed into a well-established interdisciplinary site on inquiry and academic knowledge production, challenging traditional discipline's understandings of women's experiences from a critical perspective. Critical research and teaching on gender/sex, gendered hegemonies, gender relations, gender identity and social categories is today carried out in universities in many countries all over the world. Consequently, is possible to speak of feminist studies as a specific academic field of knowledge production (see Lykke 2010; Berger and Guidroz 2009). Interdisciplinary since its very origins, is mostly non-traditional, allowing for new synergies and cross-disciplinary dialogues to emerge between heterogeneous fields of theory and methodology. On this ground, one of the driving forces among diverse viewpoints has been the articulation of the paradigm gender along with other categories such as class, ethnicity and sexuality. Indeed, there is a line of continuity implied in a strong challenge to traditional sciences on the grounds that the social/cultural/human sciences throughout their history have sustained and legitimized biologically determinist approaches to sexes and culturally essentialist perceptions of gender. Within this framework, I approach Gender/Women's studies as a "vibrant and developing transnational phenomenon and web of activity" (Lykke 2010; foreword).

Nonetheless, on the problem of theorizing women's experiences in an accurate, grounded and nuanced way, intersectional ways of thinking have a long and complicated history within academic Anglo-European feminist thought. Minority groups' claims of invisibility within a 'universal female gender' and against essentialist discourses of gender can be documented in the very origins of mainstream women's movement (see Garcia, 1997). However, long-standing clashes and misconceptions in regards to differences among women have resulted in one of the most fructiferous and insightful theoretical debates around the interlocking socio-cultural categories of gender that the Anglo-European academia has continuously witnessed over the past decades. Within this spirit, this chapter proposes a reading on the evolution and development of differences among women in a parallel movement towards intersectional analysis, to illustrate the historical and intellectual journey of an intersectional mindset, from its much disputed origins till its enthusiastic

current reception in Anglo-European Women's/ Gender Studies, with the purpose to celebrate the interdisciplinary potential of a very transformative paradigm.

More specifically, from the decade of the 1980s, after the publication of the first women of color anthology in the U.S, *This Bridge Called My Back: Radical Writings by Women of Color* (Moraga and Anzaldúa, 1981, 1983) a paradigm shift occurred thanks to their critical intervention. A well-documented political and literary movement most visible in the Anglo-European academy since the late 1980s, self-identified women of color in the U.S compromised both activists and scholars, from many diverse disciplines and backgrounds, first united with a clear vindication against a racist articulation of gender within mainstream feminisms. Dispelling the mantra of a 'unified sisterhood' as a primary explanatory force and arguing against additive analysis of 'race' and 'class' *This Bridge's* contributors were enlarging the scope of gender analysis to ways never before anticipated. Indeed, the intersectional identities of *This Bridge* challenged traditional gender theories to articulate their own politics of location and 'situated knowledges' (Haraway 1988) in such a way they were forced to incorporate an interlocking understanding of socio-cultural categories. Interestingly, as we will see, in the decade of the 1990s intersectionality will be halted by the impact of postmodern/poststructuralist theories only to be revived again at the turn of the twentieth century.

On this ground, I wish to stress that contemporary gender theory and practice and their feminist epistemological positions are extraordinarily diverse. Gender studies, interdisciplinary by nature, are a very complex field to which many discourses contribute. However, it can be affirmed that the major paradigm shift that separates contemporary versions from earlier feminisms is a growing response to the demands for a politics of difference. The attention to difference and specificity led to an intense investigation of the production of gender identity which for women of color meant a greater focus on aspects other than gender that generate identity, for example class, ethnicity and sexuality. On the contrary, for postmodern and poststructuralists it meant highlighting the discursive, linguistic and communicative processes that construct gender identity. Acknowledging the interdisciplinary nature of this research, I not only aim at describing an engagement with gender feminist theory, structuralism, postmodernism and other main intellectual fields of knowledge. I am particularly interested in giving a general overview of so-called 'intersectional approach', which caused and continues to produce, heated debate but nonetheless, it has undeniably radically altered the way gender research is conducted nowadays, in an interdisciplinary manner.

With the intention to give voice to an undergoing reexamination of the central tenets in gender theory I urge to emphasize that many attempts have been made to articulate 'intersectional identities' along the way. To this regards, I acknowledge and underline that many feminist discussions of intersections have been carried out under other names, using metaphors and frameworks other than intersectionality. To this regard, this study does not intend to provide one and only version of this intercultural debate, rather it aims at analyzing one particular instance of many others. It is intended therefore to capture a general sense, to provide a glimpse into a conversation through its most well-known and representative voices but with no purpose to map a definitive itinerary or one way argument.

In order to lay out the main representative voices and stages in this ongoing discussion about differences among women, around the interlocking categories of gender and its progressive adoption within Women's/Gender Studies, this chapter relays on critical reading of the most relevant texts in the cultural, literary, feminist circles and mostly, postcolonial thinking, at major historical junctures. Seeking this interest, I paid special attention to those texts which best articulated the destabilization of hegemonic discourses of gender and those unmarked aspects that are challenged or altered by women of color and postmodern/poststructuralist feminists' intervention. As part of an intercultural ongoing conversation is made up of pieces: some written as long ago as the XVII century, some as recent as 2010. I try to smooth over these discontinuities by highlighting a persistent uneasiness among marginal voices within Anglo European feminist theory.

In presenting the main positions in feminist debates on epistemology, I would like to underline a pluralistic approach. Committed to a process of intense interdisciplinary debates, they present differential understandings of and intersections between discourses and gender embodiments. Epistemologically speaking, gender theories have been in critical dialogue with different strands of epistemological thought such as psychology, Marxism/socialism, structuralists and postmodern theories. Therefore, epistemological reflections intersect with many different types of postcolonial and anti-racist, postmodern/post-structuralists debates on epistemologies. As a result, my own cartographies encompass a diversity of sub-positions. This plurality is motivated by the heterogeneity and diversity of voices and perspectives that characterize feminist theorizing of gender identity. At the same time, it is intended to underline that besides this diversity, there are overlaps and shared points between different epistemological positions. Indeed, with a general overview of Anglo European feminist methodology, I intend to demonstrate how feminist approaches to methodology have continuously engaged with debates in Western philosophy to raise critical questions about knowledge production. Moreover, I seek to show how gender theories have achieved a distinctive place in academic socio-cultural research within Social Sciences/Humanities. In order to do so, this chapter is organized into nine sections: (1) Introduction, (2) definitions of basic terminology, (2.1) subject-subjectivity-identity, (3) historical background, (4) Parallel counterparts: second-wave feminists vs. minority groups in the U.S (1960s-1970s), (5) differences that divide (1980s): hegemonic feminism vs. women of Color in the U.S./Third World Feminism, (5.1) dominant feminist theory as an imaginary Space, (5.2) the politics of location: the birth of intersectionality, (6) The Impact of Postmodern-Post-Structuralist Theories (1990s), (7) the intersectional approach, (8) conclusion, and (9) references.

2. Definitions of basic terminology

As much as gender relations are subjected to change, so it does their definition. Within this framework, I approach gender as a concept that specifies, marks out and layers together several historical moments. In one meaning, it will be referred to when all women were approached as interchangeably along the lines of sexual difference and essentialist womanhood. In another meaning, it refers to a time when women of color were increasingly present, with investments in specifying no parallel experiences. In addition, the impact of poststructuralist theories would turn the category of gender into a position of the subject in language that constitutes the subjectivity of the individual. Moreover, for postmodern

feminists, gender would increasingly mean the collapse of boundaries and fixed categories of meaning. Along these lines, intersectionality would become one term for the freeing of the ideological straitjackets imposed by gender as a static category of identity, enabling the recognition of differences and similarities between women. To these regards, I shall mostly ground this chapter in postcolonial theories in order to develop an understanding of power relations. In addition, the analysis of a gendered subjectivity, informed by poststructuralist/postmodern theories, will complement an approach to intersections as processes rather than structures.

By the acknowledgement of the reiterative controversial nature of intercultural gender dialogues, I seek to emphasize that institutionalized gender-oriented scholarship urged to be rethought as an ongoing struggle over what constitutes the legitimate terrain of feminist theory and inquiry. Moreover, I intend to depict this complexity by challenging both the awareness of multiple intersections in and around gender as much as the cross over between different branches of knowledge.

2.1. Subject-subjectivity-identity

In traditional Western philosophy 'subject' is variously defined as a rational, thinking and feeling entity, the mind, the ego, the conscious self whereas 'subjectivity' (all of which are important in feminist debates) refers to the conscious thoughts or feeling, of the self. Moreover, in psychoanalysis and post-structuralist theories, encompasses the unconscious meanings and desires, as much as the discursive structures in which subjects are embedded in. In addition, 'identity' has been variously deployed across many disciplines. Evident since the work of Fanon and Foucault (1977, 1980 1981) identity has also led into discussions of agency and resistance. Moreover, in feminist experience-based theories of the subject, a woman's self is both the result of her observation, structural positioning and practical engagement with the world (Weedon 2003:112). It is in this theoretical, methodological and epistemological approach that 'identity' is deployed in these intercultural dialogues as 'the self-naming and awareness of being who you believe to be'.

In sum, the terms 'subject', 'subjectivity' and 'identity' have been fiercely contested throughout the evolution of feminist critical thinking. Competing theories of subjectivity, variously derived from humanism (liberal thinking), Marxism, psychoanalysis post-structuralism and post-colonial theory had strongly influenced the way gender theory has evolved in Social Sciences and Humanities. Moreover, they have affected and undermined the approach on how critics view identity politics in terms of authorship, production, reception and meaning of texts.

In this line of thinking, I am aware that the very question of identity-subjectivity is so complex that it would deserve a separate study. Consequently, it is also my intention to highlight that the meaning of identity and subjectivity has been and still remains a much contested terrain. In short, identity and subjectivity, made more complicated by the charge of women of color, have shaped feminist critical thought which, in turn, has helped shaped the concepts.

3. Historical background

In order to provide a context of the origins of this intercultural dialogue, the framing of a historical background would clarify why women of color in the U.S protests, insights, and

illuminating breakthroughs will entail a new stage within the development of a cross-Atlantic feminist dialogue.

To start, this revisionism takes off in the Enlightenment times since the American and French Declarations of independence opened the path to the creation of a feminist movement. The illustrated premises that affirmed that all the 'men' are born free and equal, and therefore with the same rights, progressively created the necessary social conditions that facilitated the first feminist claim of universal rights and duties arguing that women were equal of reasonable thinking and capable of self-government (Amorós 1985; Posada, 1998; Cobo, 1987).

However, postcolonial feminist thinking (Aído and Suárez, 2008; Cotera 1980; Harding and Narayan, 2000; Mohanty 1988/1991) has approached foundational texts within mainstream feminisms such as the french Olimpia de Gouges's *Declaration of the Rights of Woman* (1791) or the British Mary Wollstonecraft's *Vindication of the Rights of Woman* (1792) from the impact of colonization in the production of scholarly knowledge; that is, to what extent it can be traced an implicit inheritance of colonial thinking within early dominant feminisms.

As well documented as it is, in the preliminary stages of Anglo European women's movement, these women became the representatives of a 'universal oppressed female gender'. And to the extent in which they denounced a patriarchal logic that supported a conception of citizenship based on universal rights and duties but nevertheless, was depriving women of any political or social power, their words crowned them as the spokeswomen of a longed public challenge to a world of sexist traditions. However, from a postcolonial point of view (see Said 1994, 1979), their words were simultaneously forgetting that the political category of 'woman' they were speaking in behalf of, was part of a colonizing elite that it had internalized 'that we all are equal' by virtue of belonging to a generic human being.

On this ground, the vision of equality which these first feminists were claiming, was faithfully recreating the same sexist and patriarchal logic to which they were rebelling against since they were discursively colonizing the material and historical heterogeneity of the lives of women, producing a 'collective feminist subject' that had the mark of the authoritative voice of Western humanist speech. Due to the 'rule of colonial difference' in which cultural and social differences were naturalized in favor of a dominant norm (Chatterjee, 1993), for these first feminist voices difference equaled *sexual difference* alone. Along these lines, postcolonial revisionism foregrounds how in the realms of hegemonic structures of power, direct or overtly these women were locating gender strictly with the framework of sexual difference, in the dichotomy between the public and the private, thereby enabling the mediation of an abyss of experiences too broadly confronting as to be homogenized in a single category of 'woman' (see M. George, 1998)

Within a North American Scenario, *The Declaration of Sentiments* (1848), whose main figures were Elizabeth Cady Stanton and Lucretia Mott, reproduces the same pattern in which the naturalization of cultural differences within the solely category of 'sexual difference' not only becomes the bases of exclusion/subordination of women within an essentialist gender but mostly, it signals the birth of a very specific feminist consciousness and agency: Western, middle-class biased. Specifically, the absence of a class or racial consciousness is precisely what characterizes these first announcements. That is, the lack of inclusive

representation of non-white middle-class women who were experiencing oppression in terms of slavery, cultural assimilation, working-class or immigrant stigma. For the first time in history, a collective feminist political subject is articulated, but it does so, on the basis of an essentialist gender. This ideological position of an atemporal and anti-historical sexual difference overshadowed the very role that cultural differences were playing in the construction of a 'universal woman'; and in doing so, these first feminist manifestos somehow were undermining the very legitimacy of their vindications. Hence, the first feminist political subject was reproducing was discursively colonizing the material and historical heterogeneity of the lives of women, producing a 'collective feminist subject' that had the mark of the authoritative voice of Western humanist speech (see Mohanty 1991: 53).

Thus, I would like to bring attention to the historical background that fostered class and 'racial' division among feminists. In particular, how the relationship of minority groups to the women's movement has been from the very beginning marked by complex factors affecting the development of white women's authority voice and non/white women's invisibility. Replicating the same logic, first Anglo-European feminists' claims can be affirmed to be those of a 'sexual equality' vindicated from a *cultural neutral gender* signaling the ethnocentric limitations of the first feminist manifestos.

4. Parallel counterparts: second-wave feminists vs. minority groups in the U.S (1960s-1970s)

To continue tracing the logic of difference within Western mainstream feminisms, the decade of the 1960s represents the emergence of women experiences as a body of critical knowledge that progressively becomes institutionalized in the Anglo-European academia. In what it could be referred as the beginning of the decolonization of Western imagination' new scientific approaches such as psychoanalysis and semiology began to break down the binaries that had governed Western philosophy (as abstract/concrete, mind/body, culture/nature). In doing so, a new stream of critical consciousness began to be articulated within the boundaries of Anglo European rationale and imagination. The politization of marginal viewpoints and the des-identification of identity as a hallmark of critical western thought enabled therefore a framework that made possible that 'women's experiences' reached a new theoretical dimension and began to be mobilized, approached and analyzed as 'critical knowledge'.

Within this context, the initial task of the so-called 'second wave' feminist theorists was to generate theories that would account for the fundamentality of women's oppression. My aim here is to display some broad characteristics that might figure in clarifying what mainstream feminism encapsulated in the 1970s, with the purpose of understanding the resulting racist claims, the anger and the frustration of women of color in the U.S. Drawing strongly on the methodologies of Marxism, psychoanalysis, and linguistic structuralistic theories, gender theories had empathized with their struggles against the grand narratives of the Western enlightenment and modernity as much as with their focus on the des-articulation of a universal subject. Consequently, I will briefly map out the main features in the different approaches of the most representative trends that theorized what they understood to be the constituting nature of feminism.

For liberal feminists on one hand, for whom gender equaled sexual difference alone, women and men are basically the same and they drew heavily on this to press for changes in the

status (Nicholson, 1997). On the contrary, for Marxist/Socialist feminism the influence on Marxism brought to their theorizing an awareness of historical change and class position however, class was added to gender as an analytical tool (Weeden 2003) Moreover, a radical positioning awoke determined to free gender from its *Sexual Politics*' (Millet 1970) patriarchal constraints and so, for radical feminists such as Robin Morgan (1970) or Mary Daly (1978) the true revolution was based on the destabilization of universal structures of patriarchy as the primary determinant in women's oppression. This new radical impetus to theorize an engendered subjectivity also led to many theorists such as Luce Irigaray (1984) or Nancy Chodorov (1979) to turn into psychoanalysis.

Under these trends, gender theory encompassed a broader definition to include the play of the unconscious, dreams and the imagination in the production of scientific discourse. However, what unifies these different fields of feminist knowledge is the interdisciplinary articulation of the concept of gender as key paradigm to underscore how individual and collectives' identities/representations and spaces have social, cultural and political implications. The problem, however, was that in the growing tendency to document women's oppression and the paramount of gender as an organizing principle of social life, encompassing generalizations about 'woman', 'sisterhood' and 'patriarchy' started to get institutionalized. Consequently, albeit its different premises and viewpoints, what bounded all together was a conception of women identity grounded in the liberal approach of a feminist subject which found its roots in Enlightenment feminisms in which gender is defined in relation to 'sexual difference' alone. On this basis, sexual difference (women vs men) was considered to shape not only the definition of gender but, as it had happened in the first feminist vindications and manifestos, was articulated as the fundamental cause of women's subordination.

With the Civil Rights uprising in the U.S, parallel movements driven by self-identified long-standing militant Africans-Americans, Chicanas- Latinas, Native-American started to denounce mainstream feminisms for its racist and essentialist discourses of gender. At this point, I find important to clarify that until sufficient capitalist, cultural, political and historical conditions enabled an era of decolonization and economic globalization throughout the globe, the critical intervention of marginal voices would not have been envisioned.

Beginning late 1960s, albeit invisibilized within academic circles, minority groups urged to depict the existence of major philosophical and tactical issues between minority groups and white women's liberation groups. Collective wrath and claims of insidious differences at the very core of a 'universal sisterhood' made undeniable that a growing number of feminist voices were choosing neither to identify nor to fully integrate within the women's movement.

As early as 1972 Marta Cotera, a prominent figure in the Chicana movement, delivered a path breaking speech titled "Feminism as We See It" to the Texas Women's Political Caucus. She clearly stated that one of the major pitfalls in regards of white women's movement was their "basic racism of the mind"; that is, a racist cultural myopia which was preventing solidarity among women of different backgrounds (1977: 18). Echoing a long history of colonial unsettled issues, she emphasized the imperative to redirect attention towards racism as a much a stronger oppression than sexism. Speaking not only in behalf of Chicanas but Blacks, minority and poor women, she was directly addressing the racism and classism that these women faced on their daily basis from feminists in the name of feminism.

“Anglo women” she proclaimed, “must analyze their emotions and intellect and think clearly on this. Is the women’s movement a move to place just another layer of racist Anglo dominance over minority peoples?”(18).

Speaking up in favor of an approach to differences, Consuelo Nieto fervent defended that “for some it is sufficient to say, “I am woman.” For me it must be, “I am Chicana” (1974: 38). On this account, Marta Cotera made very clear that:

No one can deny that we are all women, but neither can we deny that we are not The same; that many of us have not shared in the gains made in the name of “Woman” in this country. Chicanas share with the Blacks and other visible minority women many gaps in benefits enjoyed as a matter of course by white women (in Garcia, 1997:216)

A study conducted at the University of San Diego in 1976 examined the extent to which women of color feminists sympathized with the white feminist movement. The study revealed that the majority of women of color surveyed (mostly Chicanas) found that even though the majority “could relate to certain issues of the women’s movement, for the most part they saw it as being an elitist movement compromised of white middle-class women who [saw] the oppressor as the males” (Orozco 1976: 12).

In the same front, since the publication of Gerda Lerner *Black Women in White America* (1972), Black Women were making important contributions. African-American voices such as Beverly Hawkins made clear that divergent cultural, social and economic experiences were separating ethnic minority women from mainstream feminism. Affirming how *Women is not Just a Female* (Hawkins 1973), her position aimed at making visible race as an oppressive social category on the basis that minority groups shared a unique history in America “since they’ve been exploited, abused, dehumanized, and killed because of the color of their skin” (3). This historical factor had determined how their stigma as cheap labor source is deeply rooted in a colonial legacy in which either racism or oppression “have traditionally been synonyms with good business practice for America” (2). As a result, accusations that white women practiced class and race discrimination against women of color were complemented by the charge that they were essentially opportunists and insensitive to their particular history and experiences.

In the same line of thought, passionately confronting the irreconcilable mainstream approach to gender theory, seeking to dismantle the ‘culturally dominant logic’ among women, the “Black Feminist Statement” was proclaimed by the Combahee River Collective (1974). Framed both as a denouncement of the capitalist/economic globalization impact on women, workers and ‘third world’ people, as much as a firm reaction against gender’s additive model and the imperializing nature of hegemonic universals, they affirmed that:

We are actively committed to struggling against racial, sexual, heterosexual and class oppression and see as our particular task the development of integrated analysis and practice based upon the fact that the major systems of oppression are interlocking. The synthesis of these oppressions creates the conditions of our lives (Anzaldúa and Moraga 1981: 210; emphasis mine)

In their words, gender finally emerges out of a grid of interlocking categories of oppression and privilege. Beyond the scope of public and private dimensions, the demand of an “integrated analysis” revoked gender as a non-politically neutral discourse that strongly needed to rethink its universalistic pretensions. Moreover, it was a reminder of a

multiplicity of worlds cross-culturally interconnected. As a path-breaking destabilization of gender, this new historical consciousness would change the way differences among women were to be theorized and negotiated and it will plant the seeds of a forthcoming women of color anthology: *This Bridge Called My Back: Radical Writings by Women of Color* (Alzandúa and Moraga 1981, 1983).

This lack of unity and solidarity reached its peak at the beginning of the decade of the 1980s, and it was made most visible at the 1981 National Women's Studies Association Conference titled "Women Respond to Racism". Although the very title was conceived by the NWSA conference organizers as a remedy of these tensions, a sinister division among sisters was clearly depicted and an initial impetus was sadly clouded by the imposition of "the parameters of white women's values" (Sandoval 1990: 55). As a result, two categories were clearly opposed: "third world" and "white" (57). Consequently, what it was aimed to become a bridge ended in painful encounter of clashing ideas, leaving each group frustrated and incapable of working together. Chela Sandoval, the secretary of a 'third world women alliance', acting as a spokeswoman of 'minority women' resumed that, despite its theme, the racist structure of the conference alienated people from each other and from the topic in such a way the "separations between women are being frozen into place" (56). Accordingly, the Women of color/Third World Women in the U. S participants, left the conference with an infamous and distressing feeling that 'white women' had yet to directly address the issue of racism among women.

Furthermore, in spite of its denomination, the problematic issue of racism was setting women apart from each other as much as highlighting a separation between the analytical dimensions of gender and 'race'/ethnicity. Therefore, at this stage, what it was made clear was that approaching gender was to grapple with a problem: the loaded concept of identity and the controversial category of 'woman'. Without the incorporation of 'race'/ethnicity class and sexuality as multiple sources of oppression, coalition with white feminists would be highly unlikely.

5. Differences that divide (1980s): Hegemonic feminism vs. women of color in the U.S./third world feminism

The publication of the path-breaking anthology edited by chicanas Gloria Anzaldúa and Cherríe Moraga *This Bridge Called My Back: Radical Writings by Women of Color* (1981, 1983) was as a confirmation of an-going understanding of how 'race'/ethnicity, one's culture, socio-economic status and sexual orientation can deny easy access to any legitimized gender category. In the soliciting letters, both editors stated:

We want to express to all women –especially to white middle-class women- the experiences which divide us as feminists; we want to examine incidents of intolerance, prejudice and denial of different- ces within the feminist movement. We intend to explore the causes and sources of, and solutions to these divisions. We want to create a definition that expands what "feminism" means to us" (Moraga and Anzaldúa 1981:lii; my emphasis)

Its confronting insights collapsed for the first time traditional boundaries of identity and subjectivity, bringing into play fragmentation and power dissymmetry among feminists of different nationalities and backgrounds. This multi-genre book challenged 'white identified' feminists to deal with racism and other interlocking oppressions as never done before,

leading to a major re-conceptualization of mainstream gender theory. Motivated to break down all the racial frontiers which were enchainning gender to a mere sexual difference framework, women of color explicitly acknowledged in this anthology their historical bonds with colonized countries, hence awoken to the 'consciousness of a third world within a first world'. In their view, the democratization of cultural specificity compromised a commitment of aligning social categories in the specificity of their daily interactions. Indeed, the unfolding of a multidimensional-gender was aimed at the disruption of the prevailing additive gender model institutionalized during the second-wave period. Their unity, conceived as a continuous process of metamorphosis, emerged out of an intersection of different vectors of oppression/privilege capable of weaving difference, equality and diversity into a coalition of these interactions, utilizing them as political tactics constructed in response to dominating social powers. These social powers are located and refrained as an unfair capitalist patriarchal system that goes back to colonization times.

Not only praising its attention to differences among women *This Bridge* magnified them in order to make visible gender's interlocking social categories. At its strongest and most provocative, however, *This Bridge* does not simply emphasize difference. Rather, it redefines difference in potentially transformative ways. As a result of its impact, a reaction-in chain was activated towards the study of power dynamics within differences among women from a rhetorical making. Consequently, a central question remained the definition of feminism itself.

5.1 Dominant feminist theory as an imaginary space

On this ground, although gender studies had benefited from the proliferation of several women of color path-breaking anthologies, it wasn't enough critical insight on the role of their vindications in shaping Women's/Gender studies.

Consequently, my point here is to heighten how the recognition of differences among women -in practice, in struggles and theorizing, would prove gender theory as something less solid, more complex and diverse than had appeared to be in the beginnings of the 'second-wave' period.

In contrast to official' genealogy of feminist consciousness undertaken by influential theorists such as Lydia Sargent (1981), Allison Jaggar (1983); Hester Eisenstein (1985), Gayle Greene and Coopelia Kahn (1985) and Elaine Showalter (1985), the strategy that women of color would follow, situates difference at the focal point of gender theory. Specifically, in contrast to neo-liberal perspectives to differences as the object of study, for women of color differences were experienced and theorized as strategies (see Sandoval 2000).

In the pursuit of tracing an objective historical account of the history of feminist consciousness, mainstream theorists had divided this evolution into 'liberal' 'Marxist' 'radical/cultural' and 'Socialist' stages. Nevertheless, as it had happened with the early theorists of 'second wave' feminism power dynamics among scholars played an important role in the contesting discursive asymmetry between gender theory as a body of knowledge within the academy and its effectiveness in giving voice and representing inclusively the wide variety of women's experiences.

Hence, According to Hester Eisenstein and Alice Jardine in *The Future of Differences* (1985) for liberals, the primary goal was "to remove obstacles of fully participation in society and

to demonstrate that these differences could be *reduced*" (1985: xvi emphasis on the text). However, when liberals defended reason as universal, women of color demanded an approach concerning women and power investigated in specific contexts. As *This Bridge* stated, a serious investigation on "the denial of differences within the feminist movement" (Moraga and Anzaldúa 1981: lli) was for them both a personal and a political priority. In the same vein, Audre Lorde described as *Sister/Outsider* (1984) this parallel trend that mainstream feminism was ignoring:

As white women ignore their built-in privilege of whiteness and define woman in terms of their own experience alone, then women of color become the 'other', the outsider whose experience and tradition is 'too' alien to comprehend (117)

Regarding the Marxists/ socialists stage, Lydia Sargent for example, in *Women and Revolution: A Discussion of the Unhappy Marriage of Marxism and Feminism* (1981) although she agrees that three previous stages failed to integrate the discussions about racism and classism within the feminist movement, she does not take into account women of color's accountability for this progressively awareness. "As the women's movement grew more diverse "recalls Hester Eisten, "it was being forced [supposedly by women of color but as Chela Sandoval points out, she does not name who (2000: 43)] to confront and to debate issues of difference" (1985: xix), albeit within a sexual difference framework. Additionally, for Jaggar, in this second stage, far from seeking to demolish or minimize women's difference from men, feminist Marxists were asserting the need to re-structure society in a way that eradicates the subordination that women suffer as a "different class" (1983: 50).

The problem was that in actuality, attempts to address the relationship of class analysis to gender amounted to adding class. Therefore, class was seen as an adjunct to gender inequality besides seen as a fundamental power relation between men and women (Hennessy 2003: 58). But as we have previously seen, *the Combahee River Collective* not only had uncovered the relationship between gender and class as interlocking in nature, mostly, it had unfolded many other interlocking systems of oppression/privilege besides that of class. Consequently, in what refers to the 'dual system' (patriarchy and capitalism) elaborated by socialists in the 1970s, women of color contended that this paradigm did not elaborate further beyond the interface between the two systems as the root of women's oppression (Harsen and Philipson 1990:19). From this vantage point, as *The Combahee River Collective* have argued, any explanation of women's lives under capitalist systems needs to begin not with the assessment that there are two systems of oppression but rather with the ways in which capitalism uses the patriarchal structures that precede it and developed alongside. Indeed. the concept of 'classism' which features in this approach understands class relations as an oppressive social practice parallel to gender, ethnicity, sexual orientation and other social categories.

Along this lines, a great example of unveiled power dynamics can be found in Audre Lorde's letter to Mary Daly after the publication of *Gyn/Ecology*. "This letter has been delayed because of my grave reluctance to reach out to you," Lorde hearty contends:

for I want us To chew upon here is neither easy not simple. The history of white women, who are unable to hear Black women's words, or maintain a dialogue with us, is long and discouraging. But to assume that you will not hear me represents not only history, perhaps, but an old pattern of relating, sometimes protective and sometimes dysfunctional, which we, as women shaping our future, are in the process of shattering and passing beyond, I hope (1984: 66-7)

While reading through Daly's accounts of the goddess, Lorde recalls, she wondered to herself: "why doesn't Mary deal with Afrekete as an example? Why are her goddess images only white, western European, judeo-christian? (67). She narrates how she first assumed that Daly was dealing only with the tradition of Western European women, "in which case her choices were valid". Sadly, she pieced together a "white women dealing only out of a patriarchal western European frame of reference" (68). Thus, throughout this "Open letter", she accuses Daly of using tools of patriarchy against non-European women, African women in particular, by applying that all women suffer from the same oppression. While Lorde agrees that "the oppression of women knows no ethnic nor racial boundaries", she insists that "that does not mean it is identical within those differences" (70). Beyond a sisterhood that fails to recognize different forms of patriarchal oppression, Lorde unmasks Eurocentric racism within the so-called radical feminism. "The herstory and myth of white women" she firmly argues "...serves the destructive forces of racism and separation between women" (Lorde 1984:70).

Mary Daly decided not to respond to Lorde.....

Daly's silence and lack of courage to confront Lorde reinforced the stigma of discursive colonization among women. As Amber L. Katherine analyses in "A Too Early Morning: Audre Lorde's "An Open Letter to Mary Daly" and Daly's Decision not to Respond in Kind" (2000) Daly, like other radical feminists at that time, wasn't able to grasp how Lorde's radical black politics and her feminist black complaint were just one voice (290). As a result, Daly was unable to see how the claim for multiplicity in feminist voices was Lorde's challenge of a radical, revolutionary movement. Moreover, by not replying to Lorde, Daly put into question if her 'radical feminism' was nothing more than a eurocentric radical feminism, which against everything that it predicted, was a way of thinking that perpetuated the same patriarchal structures they were revealing against. As Lorde strongly insisted: "assimilation within a solely western european herstory is not acceptable" ((Lorde 1984:70)

As we have seen, in order to question mainstream theorizing, major counter-attacks were made by women of color to these institutional strands. Mostly, it was brought into surface dissymmetrical power relations implied within gender's multiple and overlapping axes of signification. In particular, an analytical myopia was highlighted which was carried out since Enlightenment times that had turned feminist theory into a conceptual fantasy around a flawed gender. It was flawed because it was added to other social categories as if they were layers that could be taken apart from each other. It did not thus stand for how the relations of power implicate one another. On this ground, intense intercultural dialogues revealed 'gender analyses as an imaginary location'. Therefore, the feminist theory produced from the decade of the 70s to the end of the 1980s was attacked by women of color as the articulation of an *imaginary space* (Sandoval 2000: 52.3) an ethnocentric collective illusion and theoretical delusion.

5.2 The politics of location: the birth of intersectionality

As a result of women of color's major insights into a new gender cross-examination 'the politics of Location' in gender analysis is acknowledged, allowing the unique and genuine character of women's experiences to finally become both the source and the analysis of

critical knowledge. First articulated by North American feminist theorist and poet Adrienne Rich intends to give voice to a new cognitive mapping of gender and its interlocking social categories in the recognition that gender must be specifically located.

To these regards, Rich wonders how was it possible that white feminists had educated themselves about such enormous amount of knowledge over the past twenty years that “how come they hadn’t also educated themselves about women of color women when it is the very key of their survival as a movement?” (cited in Lorde 1983: 100). Attempting to extent women of color critical gaze toward identity, Rich shares their sense of urgency as she targets mainstream feminists to re-examine the politics of their location in North America. “The need to examine not only racial and ethnic identity”, Rich elicits:

but location in the United States of North America. As a feminist in the United States is seemed necessary to examine how we participate in mainstream Cultural chauvinism, the sometimes un conscious belief that white North Americans posses a superior right to judge, select and ransack other cultures, ... we can't explode into breadth without a conscious grasp on the particular and concrete meaning of our location here and now (1986; 162)

Along these lines, feminist struggle no longer meant a synonym of resistance to relations of domination (in its broad a-historical patriarchal sense) but “the capacity for action that specific relations of domination enable and facilitate” (Mahmood 2005: 203).

Within this ‘located’ scenario, finally, the specific birth of intersectionality as a concept is theoretically formulated and validated within women of color academic circles at the end of the decade of the 1980s. In 1989, the African American lawyer and feminist theorist Kimberley Crenshaw coined ‘intersectionality’ in “Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics” (1989), as tool for highlighting how the categories of ‘race’ and ‘gender’ are mutually interconnected in the daily struggles and experiences of women of color. An intersectional mindset was finally in motion. Reinforced by prominent feminist theorists such as African American Patricia Hill Collins in *Black Feminist Thought: Knowledge, Consciousness and the Politics of Empowerment* (1991) the critical intervention of *This Bridge* had finally found a promising epistemological tool to make visible the experiences of women of color. “Instead of starting with gender and the adding in other variables such as age, social orientation, social class, a religion, Collins informs:

black feminist thought sees these distinctive systems of oppression as being part of one overarching structure of domination. Viewing relation of domination for any given socio-historical context as being structured via a system of interlocking race, class and gender oppression expands the focus of analysis from merely describing the similarities and differences, distinguishing these systems of oppression and focuses greater attention on how they interconnect. Assuming that each system needs the others in other to function creates a distinct theoretical stance that stimulates the rethinking of basic social sciences concepts (226)

6. The impact of postmodern-post-structuralist theories (1990s)

Moving on to the decade of the 1990s, and due to a negative and reactive criticism to gender brought up under the light of intersectionality, postmodern and poststructuralists feminists dashed into this academic Anglo European debate aiming at destabilizing singular identities even further. The term ‘subject’ will become ingrained in a grammatical meaning embedded

in the linguistic structures and predicates which were central to post-structuralist theories of subjectivity. In these theories, the identification with the position of the subject in language constitutes the subjectivity of the individual. For postmodernist, the attention will be placed on the collapse of boundaries and fixed categories of meaning. As a result, crucial methodological incompatibilities between women of color's insights and postmodern and poststructuralist feminist will arouse and gender and its interlocking categories will become a contested site subject to variable interpretations. In doing so, a fascinating debate would take place engaging minority groups and mainstream feminists alike.

Stepping into Postmodern Theories, it is crucial the work of North American scientist and theorist Donna Haraway highly influenced by Foucault, in her *ciberfeminism* (1990) where she introduces virtual scenarios for the advancement of re-conceptualizing a new understanding of gender (Lopez-Varela, 2012) and its interwoven axes of differences. Indeed, the postmodernist focus in the collapse of boundaries and fixed categories of meaning would be a source of engagement with women of color, for whom the vexed concept of gender and its intersectional "new value system" was now foregrounding of a recognition that commanded the capacity to "blur boundaries" (Anzaldúa, 1987:103). Postmodern emphasis on 'fragmentated identities' (Zalbidea, 2011) nonetheless would distance themselves from women of color imperative to attend to multiplicity as a whole, not as a fragmentation.

In addition, in more 'textualist-discursive stance', poststructuralist feminist theories chiefly associated to various degrees with Derrida, Foucault and Lacan, sought to focalized the center of the analysis to the exploration of subjectivity as an 'engendered performance'. Within this context, deconstruction will be embraced as a necessary methodological tool to analyze identity. Moreover, human embodiment, passive for traditional gender theory, would turn into a dynamic and interactive constructivist ('subject positions') gender theory. For Italian feminist philosopher Rossi Bradotti (1998) it meant the incorporation of 'nomadic subjects'. For the Bengali-U.S based Gayatri Spivack, the feminist subject will necessary be part of 'subaltern consciousness' (1988). Moreover, for Italian feminist film critic Teresa de Lauretis, the value-coding of gender theory needed to be approached through semiotic lenses. Thus, she draws on the theories of Althusser and mainly Foucault to defend what she called as 'technologies of gender' (1987).

Nevertheless, if there was a theory that really made an impact was Judith Butler's theory of performativity. In *Gender trouble* (1990) and *Bodies that Matter: On the Discursive Limits of Sex* (1991) Butler denaturalizes gender categories by proposing that they are performative; that is, gender is part of an overall structure of power that can be disrupted by individual agency. Butler's main point would be that power relations not only determine and constitute the subject but there are the very pre-condition for its agency. Interestingly, performative agency burst into feminist theory to complement the intersectional awareness of social categories. However, the most controversial part of Butler's view was that if identity was oppressive, then, social liberation would depend on the freeing from normalizing categories of identity; that is, eliminating categories all together, something that women of color could not afford to do. As a result, intense methodological clashes would provoke much heated debated. On this ground, framed in a context marked by the problematization of language, the increasing impetus by women of color to apply an intersectional gaze will be halted by strong criticisms of identity politics and its emphasis on

experience. Moreover, the 'counter-affirmation' of oppositional identities will be opposed by post-structuralists on the basis that ended up in reasserting the very dualisms they were trying to undo. Indeed, both post-structuralism and postmodernism argued that the reliance on personal identity leads to an individualistic notion of change. Positioning themselves very differently, women of color firmly opposed to transcend 'gender's politics of location' since the relation of experience to discourse is what they believed to be at issue in the definition of gender theory.

Consequently, post-modern/poststructuralist feminists were claiming that there were multiple realities only accessible through representations of culture, or deconstructions of language and discourses, and therefore no single truth or accessible reality could be tackled if realities were only what people believe them to be. On the contrary, women of color completely rejected this relativist perspective. They understood nonetheless, that language is a critical element in connecting knowledge and experience, if it is through language that identities, subjectivities and experiences are made, given meaning and remade. In other words, the charge of interlocking oppressions led not only to a reflection of the intersection of axes of oppression/privilege with gender, but also to the reworkings of what constitutes identity. Within this spirit of methodological clashes the concept of 'woman' was impossible to formulate in a consensual way precisely for feminists themselves.

The magnitude of the controversy is most brilliantly depicted in 'The Greater Philadelphia Philosophy Consortium' (September 1990) in which, specially Turkish- United states based critical theorist Seyla Benhabib and American post-structuralist Judith Butler, performed a fructiferous interdisciplinary cross-over aimed at generating communication across theoretical boundaries and political divisions (Benhabib, Butler, Cornell and Fraser, 1995).

On one side, there was Benhabib's denial of postmodernist premises and her dispute with Butler about an unclear normative vision of agency which follows from or it is implied by her theory of performativity. And on the other, Butler's reaction to critical theory as the articulation of a 'stable subject' will be subjected to the denounce that any type of 'comprehensive universality' recreates totalizing notions of gender identity only achieved at the cost of producing new and further exclusions. At one point, either critical theory or a post-structuralist perspective will become completely incompatible and it will be demanded to be chose between one or the other in order to successfully approach gender and its social categories.

To mediate in the debate, Nancy Fraser in "*A False Antithesis: A Response to Seyla Benhabib and Judith Butler*" argued that their arguments have created a series of 'false antithesis' that were clouding current gender theories. Her point was to establish the links between both standpoints to demonstrate that they were not so incompatible after all and both insights were enriching gender analysis. As Fraser would argue, the discursive signification of gender brought by the 'linguistic turn' remained only one dimension of sociality among others.

Accounting interlocking differences through open-ended cartographies consequently remarked a crucial priority since if the Philadelphia debate reached any conclusion that would be the need to articulate more complex frameworks open to both specificity and strategic alliances. Despite methodological and theoretical clashes, the point remained that 'differences' had emerged as a central -albeit contested and paradoxical- concept within

gender theory. Indeed, even though women of color acknowledged the relationship between categories and the dynamics of power, their anthologies were a claim, as much as a demonstration, of how, in specific historical contexts, the use of identity politics had been a crucial mechanism of resistance and a more effective criticism than the semiotic deconstruction of classism or sexism as categories of power.

On a different stance, the concept of intersectionality was also being strongly attacked by British feminists Nira Yuval-Davis and Floya Anthias who were demanding intersectionality to move beyond its restrictive emphasis on identity politics. In *Racialized Boundaries: Race, Nation, Gender, Colour and Class and Anti-Racist Struggle* (Anthias and Yuval-Davis 1992), their point would be to highlight a restraining homogenization of oppression (as 'women of color in the U.S/U.K.') led to a formulation of intersectionality in such a way that dismissed the importance played by the symbolic dimension of gender identity construction. On that ground, Anthias and Yuval-Davis brought into question the need to develop an analytical framework that would enable the articulation of both the material and the symbolic dimensions of social divisions in an intercultural way.

Influenced by Italian Transversal feminists, Yuval Davis will develop the model of 'rooting and shifting' gender identity positions. To clarify this strategy of 'rooting' and 'shifting' Yuval-Davis elicits how:

*The idea is that each ...in the dialogue brings with her **rooting** in her own membership and identity, but at the same time, tries to **shift** in order to put herself in a situation of exchange with women who have a different membership and identity. They called this form of 'transversalism' to differentiate from 'universalism' which, by assuming a homogenous point of departure, ends up being exclusive instead of inclusive (1997:130; her bold)*

At this point, within the Anglo-European Academia, the debates will be centered around two main ways of approaching and interpreting the intersectionality of social divisions: on one side it was the intersectional model developed by Third World feminists in the U.S and on the other side, the constitutive 'rooting' and 'shifting' model offered by the British transversal feminists.

7. The intersectional approach

Within this context of re-articulating more inclusive identity-formulas the urgency of the implementation of an 'intersectional' vantage point to differences among women will start to powerfully vibrate again. The paradoxes, power dissymmetry and fragmentations of the XXI century context required feminists to shift the identity debate to one approach that would enable an analysis of the global and the local interwoven.

To these regards, a remarkable twist occurred within women of color's perspectives. In order to address the contested nature of an intersectional approach strongly affected by its association with radical identity politics, women of color would be finally willing to abandon restrictive labels. As a result, Gloria Alzandúa and Anne Louise Keating edited *This Bridge We Call Home*, in which *Radical Writings by Women of Color* transmuted into *Radical Writings for Transformation* (2002). The message sent by the editors was that clear: the loosening of previous restrictive labels, while intensely painful, is the only path to create shifts in consciousness and transgressive opportunities for change.

This Bridge we call home carries the displacement further. It questions the terms white and women of color by showing that whiteness may not apply to all whites, as some possess women-of-color consciousness, just as some women-of-color bear white consciousness. This book intends to change notions of identity, viewing it as a more complex system covering a larger terrain, and demonstrating that the politics of exclusion based on traditional categories diminishes our humanness (2)

Glora Anzaldúa's most provocative claim relays on her emphasis on consciousness, as she shifts she proposes go from the external (culturally-imposed and racialized categories) to the internal (self-selected ways of thinking and acting). In particular, I intend to make visible the grounds of a new approach towards intersectionality; one that would no longer delimit or distract intercultural dialogues by the means of its identification with women of color's experiences. In this spirit, *This Bridge We Call Home* symbolizes as an insightful momentum within this intercultural dialogue, in which boundaries tore apart, broke down and finally became more permeable.

At this point, 2002, the intersectional awareness of gender identity had become the continuous reinvention of universal claims by the particularization of specific meanings. On this ground, a new stage for intersectionality was bound, to some degree, to provoke a new response within the academia in what it's been recently named as the 'Intersectional Approach' (see Berger and Guidroz 2009).

Current discussions as those depicted in the *European Journal of Women's Studies* 2006 Edition and the latest analyses on this issue as such exposed in *The Intersectional Approach: Transforming the Academy Through Race, Gender and Class* (Berger and Guidroz 2009) and in *Feminist Studies: A Guide to Intersectional Theory, Methodology and Writing* (Nina Lykke 2010), explore what makes intersectionality so successful nowadays. Unexpectedly, it has turned into an interdisciplinary joint platform that provides a way to overcome incompatibilities between women of color's theory and post/modern, post-structuralist feminisms.

Kathy Davis, in her article "Intersectionality as a Buzzword: A Sociology of Science Perspective on What Makes a Feminist Theory Successful", is convinced that the promise of an intersectional perspective is that it offers a novel link "between critical feminist theory and the effects of sexism, class and racism and a critical methodology inspired by postmodern feminist theory, bringing them together in ways that could not have been envisioned before" (73). In her view, intersectionality is the interaction of multiple identities and experiences of exclusion and subordination (67). Anne Phoenix in "Editorial: Intersectionality", celebrates its semantic potential as "a handy catchall phrase that aims to make visible the multiple positioning that constitutes everyday life and the power relations that are central to it" (2006: 187). On the whole, there is still no general agreement on how to proceed with it, use it as a method or as a theory. However, it seems to be a consensus within academia, that it should be embraced mostly 'as a dynamic process' (Staunanes 2003). The fact that it serves to give voice to one of the most problematic normative concerns; that is, how to name differences among women in a non-hierarchical and exclusionary way, gives it potential to "provide a platform in which feminist theory could be theorized as a joint enterprise in an interdisciplinary way" (Davis, 72). As Davis points out, the new intersectional gaze matches perfectly with the postmodernist project of multiple and dislocated identities and its mission of deconstructing normative, totalizing and foundationalist categories (71) Moreover, it aligns with the commitment of the politics

of location, which Haraway coined as 'situated knowledge' (183-201) and it works with Butler's performative approach to gender and its understanding of power as a dynamic process that can be disrupted by individuals' agency.

Methodologically speaking, despite the plurality of ways in which intersectionality is currently being applied, it could be said that what unifies its different strands is the idea that only by treating social categories as relational, can illuminating and fruitful knowledge be produced (Yuval-Davis, 2006 194). However, the unfolding of how these social positions relate has created a great deal of debate (see Sotelo, 2009). Recently, the focus of the debate has been shifted from the relationships among social divisions themselves towards the different analytical levels in which intersectionality is located. Some claim that since categories such as 'race' or 'class' have different organizing logics, social categories cannot be treated at the same level of analysis. (see Staunaes) In the same vein, Mieke Verloo in "Multiple Inequalities, Intersectionality and the European Union", points at how "different inequalities are dissimilar because they are differently framed". Therefore, she argues that "it's important to ground policy strategies not in the similarity but in the distinctiveness of inequalities" (2006: 212). Yuval-Davis, in "Intersectionality and Feminist Politics" emphasizes how "social divisions are about macro axes of social power but also involve actual, *concrete people*" (198, italics mine). She stresses the separation of different levels of analysis. She explains how "social divisions have organizational, intersubjective, experiential and representational forms, and this affects the ways we theorize the connections between the different levels". (194).

Progressively, both in Europe and in the United States, it has generated an intense theoretical debate and has become one of the main topics of research within Women's Studies Programs. In "Narrative Accounts of Origins: A Blind Spot in the Intersectional Approach?", Baukje Prins (2006) focuses on British and North-American trends and makes a division between what she calls 'systematic intersectionality' (mostly US-based) from 'constructionist intersectionality' (mostly UK-based). In her view, the constraints of the systematic approach and its limits on representing complexities derive from the way categories are approached as implicitly a part of a structure of domination and marginalization, it translates into a notion of power as 'unilateral and absolute' in which the subject is primarily constituted by systems of domination and exclusion and is taken to be the passive bearer of the meanings these social categories imply. Prin, on the other hand, argues that the constructivist approach allows for a more nuanced complexity because categories of signification are viewed as part of a creative, constructive process in which the relationships between positioning, identities and political values are all central and not reducible to the same ontological level. According to the constructivist perspective, markers of identity such as gender, class, etc. are not only merely "disciplinary powers" (Collins, 1998, 79 note 5), limiting forms of categorization, "but simultaneously provide narrative and enabling resources" (Prin, 2006: 280).

8. Conclusion

As we have seen, gender, class and 'race' were once seen as separate issues for members of both dominant and subordinate groups. Nowadays, however, a growing number of scholars generally agree that these categories (as well as sexuality, age, dis-ability and so on) and how they intersect are a crucial knowledge to understand individual's position in the grid of

social relations. Indeed, it is undeniable that social categories play a fundamental role in structuring and representing the social world. Since they are embodied connections of gender, class, ethnicity, sexual orientation and so forth, when approached as interlocking, intersectionality offers us tools for de-legitimizing the negative stereotypes of these categories, as much as the possibility to deconstruct the very mechanisms that maintain gender/class/racial, etc orders.

Continually changing, interactions shape both everyday relations and social structures by mutually reinforcing interlocking vectors of privilege and marginalization. Hence, as the intersectional scholars previously analyzed shows us, the intersections of social power are evident both as the micro layers of daily social life as well as the broadest layers of global restructuring. In its two-fold nature, it both defines individual identity in connection to one's particular social location and, at the same time, it structures a global system of privilege and exclusion. The power of intersectionality then, relays on the fact that it has become a new inter-disciplinary dynamic site of knowledge that tackles unequal social relations of power, both privileging and/or marginalization, in gender identity formation processes. At this point, it can be affirmed that the diverse theories (and methodological approaches) that contribute to the current intersectional approach represent a new social literacy for scholars, a "disciplinary border-crossing concept" (Berger and Guidroz 2009: 7), not necessarily implying that the power dynamics- battle will be ever won, but making it necessary to read texts differently.

Consequently, what contemporary theories on intersectionality offer scholars and students who are studying identity is the idea that identities are not fixed but constantly shifting and navigating across social boundaries. Treating social categories as relational and as a dynamic site of knowledge is the main requirement of a transformational mindset. Along these lines, the rich variety of approaches offered by the field today undoubtedly shows that intersectionality has become a very appealing way of doing research.

The potential of the intersectional approach thus stems from its dynamic analytical framework in which, on one side, categories are essential but on the other, they are called and put into question. On this ground, it can be affirmed that what Social Sciences-Humanities can benefit from intersectionality is the articulation of a new formula in progress aimed at providing a 'safer' theoretical space where differential power relations are acknowledged and addressed rather than overlooked. Indeed, throughout this journey towards intersectionality, the main challenge to mainstream feminism has been to recognize that individuals are raced, sexed, classed as much as being gendered. Moreover, it has discredited the 'additive-multiplicative' claims of multiple oppressions as much as it has rethought its own limitations on the basis that it does not distinguish between different levels of analysis apart from the experiential (Yuval-Davis 2006:197). In this way, intersectionality offers a critical alternative to identity politics since it takes into account intra-group differences and calls into question any homogenized or essentialized group-identity category such as 'women of color', or 'whites'.

And it is precisely at this point, that is, the loosening of previous restrictive labels in a stage in which differences among women had evolved to incorporate an intersectional approach to gender identity, in which I would like to highlight what in my opinion lays the key to understand the evolution of differences in its journey towards intersectionality. Consequently, this general overview sustains the argument that the explicit embracement of

intersectionality within Gender/Women's Studies at the turn of the xxi century, gave voice to a theoretical endeavor that until then had been widespread and outspoken among women of color academic circles but it lacked the proper articulation that an all-inclusive conceptualization establishes; that is, the required receptivity to collaborative approach.

One argument that I make about gender theory in feminist studies is embedded in my approach to feminist thinking and production as part of 'on-going dialogues' with the intention to challenge both traditional taxonomies and to defy any unitary history of Women's/Gender studies. Therefore, one of my main points has been to heighten the particular specificities in the discourses of gender identity among Anglo-European feminists, very much historically -at times almost momentarily- located, continually rewritten and re-inscribed with new meanings.

To approach contemporary gender theory then implies the willingness to pull the threads of divergent and connective meanings, layers of both theoretical abstraction and specific and particular experiences, of categories and feelings, inclusion, collective awareness and particularity.

Throughout the time span covered, the evolution of differences among women encompassed a theory which emerged out of tensions between movements and power-laden debates about which intersections, power differentials and regulations should be given priority in which political contexts. Thus, to the extent that I have stressed the evolution of differences among women, I have also mapped intersectionality's various stages within the Anglo-European academia, in the light of on-going efforts to theorize intersectional categories of identity as a cross cultural tool.

However, I don't mean that 'dialogues' are not deployment of power dynamics. On the contrary, I believe that 'intercultural dialogues' discussing power differentials is the first step to destabilize them. Thus, I have approached its controversy as a part of an on-going intercultural debate that has offered and continues to provide, highly sophisticated theoretical insights in addressing the power dynamics in the intersections of gender, in order to comprehend and activate the processes of undoing traditional approaches. Nonetheless, as a much-disputed concept, I have also intended to reflect how intersectional analyses are still under continuous interrogation. To these means, by approaching women of color/Third World Feminism in the U.S I intend to make complex the construction of 'gender identity', and mostly, to challenge a unified history of the 'women's movement' in an Anglo-European academic framework. Indeed, I believe that one most important contributions of women of color in the U.S., embodied in the very concept of 'intersectional gender', is to make visible a 'hegemonic' feminist theory; that is, ingrained westernized hegemonic analytical paradigms that, although it does not mean that is practiced by all, nonetheless, it refers to that powerful center that requires all other forms to define themselves in terms of it (Mohanty 1988; 1991).

Along these lines, my intention to focus on the insights of postcolonial, postmodern and poststructuralists theories to highlight a redefinition of cultural practices, generating theoretical and methodological approaches that aim at transgressing disciplinary borders. As the emergence of the concept of intersectionality is closely linked to postcolonial feminist struggles, it seeks to establish platforms for the analysis of the intertwining processes of social categories such of genderization, racialization and ethnification that operate in a boundary space between different political discourses of resistance.

Within this spirit, I deeply share the belief with this new generation of intersectional scholars that the intersectional approach increasingly constitutes a promising middle ground, in methodological terms, for interdisciplinary scholars in the application of both their teaching and their knowledge production. Along these lines, I present this work in hopes of deepening the discussion among professors and students about what this dynamic site of knowledge offers us in scholarship, teaching and activism. The breadth of this ongoing intercultural interest in dialoguing differences in an interlocking and non-hierarchical way, it definitely suggests future compelling inquiry and research.

Moreover, examinations of intersectionality call for scholars to be self-reflexive of his or her standpoint as it relates to research inquiry. Methodologically, the implementation of an intersectional approach calls upon scholars to examine the extent to which institutions reflect difference and are self-critical about how difference impact knowledge production. Although many scholars carefully situate their own social identities within their work, these disclosures tend not to fully examine the theoretical implications of intersectionality within their analyses. Consequently, by approaching identity and power differentials in isolation and not taking into account how these intersections impact the ultimate production of knowledge prevents researchers from pursuing a richer and more complex analysis. Therefore, to negotiate power dynamics across intersections of social locations must be a primary focus of any cultural or literary research. Furthermore, it is ultimately necessary to acknowledge that our particular situated perspectives (Western in this case) integrally shape our theories and teaching. As a result, the creation of an environment where faculty can develop institutionally rewarded intersectional scholarly identities would reflect the praxis of doing engaged and accountable theory and research in the twenty-first century.

In my reading, intersectionality reminds us and demonstrates both the proximity and indivisibility of gender with other social categories, as well as indicating that they are inextricably linked to other forms of social and cultural knowledge. These multiple layers ultimately challenge any notion of universally shared experiences as 'women' or any other gender for that matter urging us to interrogate the power-dynamics implied in the meanings we contest and to what extent is gender identity able to separate in practice from other power relations. Moreover, it invites us to keep our eyes on the challenge of meeting affinities that collectively binds us to one another over our differences or group identities. Above all, it allows us to join with others from the politics of location to imagine and to insist that a more just alternative is possible as long as we continue to challenge and deconstruct the very ways in which power dynamics are being formed and transformed in our daily social encounters, while we passionately pursue this aim. Only then, Social Sciences-Humanities in general and Cultural, Literary and Gender/Women's Studies in particular, can hold up a mirror that represents all voices in an accurate, grounded and nuanced way.

In sum, the challenge for intersectional theory therefore, lies not in finding ways to break out gender constrains so gender theories become more 'inclusive', but rather in developing concepts that can allow us better to understand the real material and symbolic conditions that both link and variously affect our lives. In the end, these concepts are intimately bound to the horizons for change we envision, the intercultural dialogues that we imagine, the kind of world we dare to dream about and set out to achieve.

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Cyberfeminist Theories and the Benefits of Teaching Cyberfeminist Literature

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1. Introduction

In 2010 I had the opportunity to interview Julianne Pierce, writer and artist who took part of the first cyberfeminist group called VNS Matrix, at the conference "Riot Girls Techno Queen: the Rise of Laptop Generation Women" at the Reina Sofia Museum in Madrid. When I asked her what she thought about present day cyberfeminism she answered melancholically: "Cyberfeminist movements are not as visible as they used to be during the 90s" ("Personal Interview with Julianne Pierce by Maya Zalbidea Paniagua" n/p) It is certainly true that the 80s and 90s supposed the golden age of cybercultures. Cybernetics arrived in the 1960s (Wiener 1968) but the glorious age of the Internet started in the 80s. In 1984 William Gibson coined the term cyberspace and anticipated the Internet revolution in his novel *Neuromancer* (1984). Other cyberpunk novels also illustrated a post-apocalyptic future such as: *Do Androids Dream of Electric Sheep?* (1968) by Philip K. Dick. Cyberpunk films such as *Blade Runner* (1982) and *The Terminator* (1984) received enormous impact. And some years later the Web was invented by British scientist Tim Berners-Lee in 1989, CERN publicized the new World Wide Web project in 1991, and during the 90s cyberfeminist theories and movements spread internationally. Unfortunately a climax of disillusion and a crisis of moral values has influenced negatively cyberfeminist thought, promoted by the idea that women in the third world cannot have access to the Internet, the battle between ecofeminists and cyberfeminists, and the ecological awareness of the difficulty to eliminate electronic garbage.

In the same conference I also had the opportunity to have a conversation with Professor Remedios Zafra, who investigates on cyberfeminism and the body in cyberspace. She has translated into Spanish language the most famous cyberfeminist media artworks and writings in her project "Violencia sin cuerpos", as well as introducing cyberfeminist and body theories in cyberspace in the Spanish academia publishing: *Netianas N(h)acer mujer en Internet* (2005) and has recently published *Un cuarto propio conectado. (Ciber)espacio y (auto)gestión del yo* (Fórcola, Madrid, 2010) as well as coordinated "X0y1 #ensayos sobre género y ciberespacio" (2010). When I commented that I was doing my research on topics related to hers, she coincided with Julianne Pierce's view that most of the research on cyberfeminism corresponds to the 90s period. Notwithstanding this fact, due to the increase of electronic media for reading, a renewed interest on feminist networks emerged. Nowadays the use of the new technologies is becoming more responsible and professional

in communication, research and education, and curiosity for the effects of this Information Society revolution is increasing. In cyberspace private becomes public and thus, it is beneficial to cyberfeminists to accomplish the common objectives of feminists: take part in public life and empowering themselves creating communities of politically and socially active women.

2. Bodies and gender in cyberspace

In cyberspace and electronic literature the reader and writer become posthuman. Machines become writers and writers become machines. The term posthuman is regarded positively by Katherine Hayles in *How We Became Posthuman*, from her view human can be a distributed cognitive system, where part of the intelligence lies in the human brain, part in intelligent machines and part in the interface between them (Wiman "N. Katherine Hayles: *How We Became Posthuman* n/p).

Katherine Hayles explains in *How We Became Posthuman* that it seems to be difficult to try to guess when we are talking to a person or a machine in the famous Turing test. Every time an individual uses a computer and cannot see the recipient the task consists of posing questions that can distinguish verbal performance from embodied reality. When one cannot distinguish the intelligent machine from the intelligent human there is some evidence that, to some extent, machines can think.

The important intervention comes not when you try to determine which is the man, the woman, or the machine. Rather, the important intervention comes much earlier, when the test puts you into a cybernetic circuit that splices your will, desire, and perception into a distributed cognitive system in which represented bodies are joined with enacted bodies through mutating and flexible machine interfaces. As you gaze at the flickering signifiers scrolling down the computer screens, no matter what identifications you assign to the embodied entities that you cannot see, you have already become posthuman (Hayles xiv)

Electronic literature is the one that can only be read on a computer while cyberliterature is generated by computers. Cyberliterature is a literary proposal where the machine can be considered co-author of the text (Borrás 42). In generative writing the human writer disappears. It is the machine which creates writing without human intervention. The traditional printed text is static while the digital is dynamic. The distinction of woman, man, human and machine is blurred in the use of the new technologies. As Donna Haraway affirms, the cyborg suggests the possibility of moving beyond the old limits of male and female into a new world of human, machine and animals (Haraway 173). Haraway used the metaphor of the cyborg as a means of understanding and navigating one's place in a rapidly ever-changing techno-scientific world as well as challenging what it means to be human.

Our daily use of computers is influencing us to become cyborgs, we depend on the Internet to manage practically all our social and commercial transactions: e-mails, booking on-line, searching for information, using GPS with our mobile phones, learning on-line, interacting in social networks (*facebook, twitter, myspace*), etc. When technology is added to human body in a real physical extension to repair a deficiency (in the use of contact lenses, glasses, false teeth) or to change the physical appearance (highlights on the hair, wearing heels or beauty surgery) it is not easy to identify the limits between nature and technology. As Haraway affirmed in her "Cyborg Manifesto" : "the boundary between physical and non-physical is

very imprecise for us" (Haraway, *Simians, Cyborgs and Women: The Reinvention of Nature* 153). Humans have always used tools to satisfy their needs and desires, primitive men and women worked with sticks, stones, spears, used make up and wore piercings. Present day humans use cars, computers, cellphones and other technological body extensions such as prosthesis. Haraway affirms how even if we are not aware of it we are connecting the technology to our bodies: "We are all cyborgs, hybrids of machine and organism" (p.150). Haraway makes reference to the tools of early primate females, the baby-sling and the containers for carrying things that these female primates invented to make their lives easier. These inventions were right alongside male-created weaponry tools. Those baby-slings combined with modern cosmetic surgery and other technology adaptations for women were a revelation (Haraway, *Primate Visions* 196, 334). Furthermore, according to Katherine Hayles, we have always been posthuman (Hayles 279). In sciences we find constant prosthetic applications: the C-Leg system by Otto Bock HealthCare to replace a human leg that has been amputated because of injury or illness, cochlear and magnetic implants and even the possibility to link the nervous system into the Internet as Kevin Warwick showed in his 2002 Project Cyborg.

The term "cyborg" was coined by Manfred E. Clynes and Nathan S. Kline in 1960 to refer to their conception of an enhanced human being who could survive in space, in extraterrestrial environments. Clynes melded "cybernetics" and "organism" into "cyborg". Both, Clynes and Kline suggested that humans could be modified with implants and drugs so that they could exist in space without space suits (Gray 18): "Altering man's bodily functions to meet the requirements of extraterrestrial environments would be more logical than providing an earthly environment for him in space" (Clynes and Kline 26). Recently, NASA and General Motors revealed "Robonaut 2", a very advanced humanoid robot. It was part of the payload of Shuttle Discovery on the successful launch February 24, 2010. This robot is intended to do spacewalks for NASA ("Robonaut 2 wakes up in space" Nasa Homepage).

All these experiments with cyborgs and humanoid robots provide the possibilities of humans living in other planets. This question creates controversy for the hypothetical immorality of altering the nature of humans to develop cyborg astronauts. Grant Gillett, a professor of medical ethics at the Bioethics Center of the University of Otago Medical School in New Zealand expressed the ethical concern of the alteration of humans which can be so significantly that they could end up being not entirely human (Herath "Cyborg Astronauts needed to colonize space" n/p). Medical and military interventions to inject implants in human beings for getting information causes controversy too, for the loss of private life and the nightmarish possibility of being mentally controlled via satellite.

Cyborgs have been in the imaginary long time ago before technological advances. Centuries before, in 1843, Edgar Allan Poe described a man with extensive prostheses in the short story "The Man That Was Used Up". In 1908, Jean de la Hire introduced "Nyctalope" -the first cyborg superhero- in the novel *L'Homme Qui Peut Vivre Dans L'eau* (*The Man Who Can Live in the Water*). Edmond Hamilton presented space explorers with a mixture of organic and machine parts in his novel *The Comet Doom* in 1928. He later featured the talking, living brain of an old scientist, Simon Wright, floating around in a transparent case, in all the adventures of his famous hero, Captain Future. In the short story "No Woman Born" in 1944, C. L. Moore imagined a dancer whose body was burned completely and whose brain was placed in a faceless but beautiful and supple mechanical body.

Some artists have used cybernetic mechanisms to improve their bodies, to express monstrosity, or for artistic experimentation. This is the case of Orlan, the first artist to use surgery as an artistic medium, what she called: "Carnal Art" which consisted of modifying her body through constant surgical interventions. This French artist recorded her operations and used the videos as a performance. "Carnal Art" opposes the social pressures that are exerted upon both the human body and the corpus of art:

Carnal Art is self-portraiture in the classical sense, but realized through the possibility of technology. It swings between desfiguration and refiguration. Its inscription in the flesh is a function of our age. The body has become a "modified ready-made", no longer seen as the ideal it once represented; the body is not anymore this ideal ready-made it was satisfying to sign ("Manifesto of Carnal Art", Orlan n/p)

In May 1990 Orlan started a project called: "The Reincarnation of Saint-Orlan". She underwent nine plastic surgical operations to transform herself into a new woman. With these operations her aim was to deconstruct mythological images of women: have the chin of Botticelli's Venus, the nose of Jean-Léon Gérôme's Psyche, the lips of François Boucher's Europa, the eyes of Diana (as depicted in a sixteenth-century French School of Fontainebleau painting), and the forehead of Leonardo da Vinci's Mona Lisa. Orlan stated: "my work is a struggle against the innate, the inexorable, the programmed, Nature, DNA (which is our direct rival as far as artists of representation are concerned), and God!" (Orlan, Official Website n/p)

Many feminists consider Orlan an anti-feminist because she embraces plastic surgery, which is painful and dangerous for health. Orlan states that she is trying to reveal against beauty canons that men have invented. As a response, we may wonder: Would not be more appropriate to admit that instead of liberating herself from those beauty canons suggested by male artists she is using her own body as an object of circus spectacles, suffering painful plastic surgeries? Orlan has answered to feminist reproaches in the following way:

Feminists reproach me for promoting cosmetic surgery. In fact, although I am a feminist, I am not against cosmetic surgery. In the past we had a life expectancy of forty to fifty years. Today, it has risen to seventy or eighty (and is still rising). We all have a feeling of strangeness in front of a mirror; this often becomes more acute as we age. For some people this becomes unbearable and the use of cosmetic surgery could be very positive (Orlan, Official Website n/p)

The intervention of cybernetics in the human body is an idea that comes from science fiction narratives and it is present nowadays. Tattoos and piercings are signs of ancient tribes and metaphors of avant-garde and cyberculture at the same time. Most of celebrities in the media get plastic surgery. Michael Jackson's change of skin color is one of the most representative ones. The spectators have unavoidably fantasies of posthumanism "developing and making widely available technologies to eliminate aging and to greatly enhance human intellectual, physical, and psychological capacities" (Brostrom n/p). In the 21st century citizens dream of having a body in which all beautiful possibilities are exalted. According to María Goicoechea de Jorge Orlan's live plastic surgery and her slogan represents the spirit of the 90s in relation to body and its manipulation, the continuous dissatisfaction, beauty as an ideal which is always beyond us, a feeling of disadjustment and lack of identification of our own body (Trans. from Spanish by Maya Zalbidea Paniagua, Goicoechea 406).

Another artist who experiments with his own body following a posthuman philosophy is Stelarc, an Australian performance artist who has visually probed and acoustically amplified his body. Most of his works are centered on his idea that the human body is obsolete. Orlan based one of her operations on a text by Antonin Artaud who dreamed of a body without organs. Transhumanist artists and scientists are obsessed with the dream of the disappearance of the body, an old idea which Plato had already discussed, considering the body as a prison of the soul. Stelarc uses medical instruments, prosthetics, robotics, virtual reality systems, the Internet and biotechnology to explore alternate, intimate and involuntary interfaces with the body. He has made three films of the inside of his body and has performed with a third hand and a virtual arm. Between 1976-1988 he completed 25 body suspension performances with hooks into the skin. For 'Third Ear' he surgically constructed an extra ear within his arm that was Internet enabled, making it an publicly accessible acoustical organ for people in other places. Another more recent artist, French artist Émilie Simon is one of the latest cyborg musicians, she uses a prosthetic arm to control music effects and distort her own voice when performing her songs in which she mixes organic sounds, like her own voice or the sound of water, with electronic music. Her voice becomes robotic in her album *The Big Machine* (2009).

Orlan, Stelarc and Simon's work questions if our natural or artificial body represents our identity or not and how artificial materials added to the body can make the individual feel that he or she can be transformed physically to look like the self he/she feels inside. The notion we have of ourselves does not necessarily correspond to our physical bodies. An old person does not recognize himself/herself in the mirror, and some old people use a picture of themselves when they were young on their social networks profiles because this is how they may feel inside or would like to look: young and beautiful. Transgendered people think that their sex does not correspond to their gender, and in order to get rid of this ambiguity some have sex change operations. Some intersexuals also have sex change surgery, however, recent researches on intersexuals problematics reject the idea of surgical interventions on babies because they consider that the idea comes from some doctors who assume that intersexuals cannot have a real identity. Parent's choice of the baby's genitalia can create a gender identity problem on the individual in case that he/she does not feel identified with the imposed gender. Furthermore, 20-50% of surgical cases result in a loss of sexual sensation ("The Surgical Management of Infants and Children With Ambiguous Genitalia" Newman, Randolph and Anderson 644).

The perception of our own body has changed through decades. Merci Torras explains that before the creation of mirrors, men and women were born, lived and died without having seen their whole bodies, and on the contrary nowadays we can not imagine ourselves without looking at a mirror (Trans. from Spanish by Maya Zalbidea Paniagua, *Textualidades Electrónicas* Borrás 147). Cyberspace allows the individual to lose gender or to acquire different identities at the same time. When the Internet user adopts different roles, bodies or gender, he/she may acquire unconsciously transgressive identities. Cyberspace has been seen as a place where nobody is judged in no respect by one's body, but perhaps by an imagined body. Gender, race and class can disappear in the non-physical relationships online. In online games, social networks and chats, people change their genders and play the role of a different gender from the one they own. However, we wonder: Are these gender performances subversive? In the MUDs, Lori Kendall observed, this was not necessarily true. The performance was not always acknowledged, and imitations were not always subversive (Kendall quoted in Raymond "Performativity on the Net" n/p). Judith Butler

points out that the ambivalence between the ideal and the norm makes compulsory heterosexuality forever unstable, forever needing to reinforce itself, to repeat imitations of its ideals. Compulsory heterosexuality is performative because it is an ideal which we fail to approximate, and because it is an identification which we exceed, and which we cannot define us completely. Ambivalence means that compulsory heterosexuality it is a performance requiring a reiteration of norms and the continued exclusion of that which exceeds certain definitions of sexuality, race, and gender. As Butler explains performativity is not a deliberate "act" but rather as the reiterative practice by which discourse produces the effects that it names (Butler, *Bodies that Matter* 2). In cyberspace performativity and gender differences remain, therefore, it is cyberfeminists objective to create non-phallogentric spaces where women can stand for their rights.

3. Precedents and background of cyberfeminism

Cyberfeminism started in the 90s and acquired an international impact. Donna Haraway coined the term "cyborg feminism" referring to a specific branch of feminism in which women's use of the new technologies would be profitable for them in their fight against patriarchy. Echoing Karl Marx "Comunist Manifesto" (1847), Haraway published a "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century", in 1985. She criticized second wave feminism and proposed a feminist theory where affinity substitutes identity. She deployed the metaphor of a cyborg to challenge feminists to engage in a politics beyond naturalism and essentialism. The Manifesto vindicated feminists acknowledge of their situation within what she termed the "Informatics of Domination."

According to Haraway we all live in an era in which flesh is losing ground against wires and circuits. We can appreciate this cyborgization in the tecnological advances in different fields. The cyborg represents a postmodernist utopia of a genderless world without genesis. The metaphor of the cyborg is used to construct a postmodernist feminism that moves beyond dualisms (male/female, black/white, gay/straight, etc.). As well as attempting to surpass the limitations of traditional (second wave) gender politics. The cyborg represents the postmodern utopia of a world without gender or genesis. From Haraway's point of view the cyborg is unchained; it is released from God's demands or parents weaknesses. Cyborgs are influenced by militarism, patriarchy and socialism, but they are above the traditional Western polarity of public and private properties. They tend to unite front politics without any kind of innocence. Cyborgs emerge from cosmos ashes. Society is being completely reconstructed, mutating its economic, cultural, political and family environments, ignoring the given heritage from patriarchal capitalism. According to Donna Haraway:

The main trouble with cyborgs, of course, is that they are the illegitimate offspring of militarism and patriarchal capitalism, not to mention state socialism. But illegitimate offspring are often exceedingly unfaithful to their origins. Their fathers, after all, are inessential (Haraway, p. 151)

Haraway suggests a society deconstruction and a renewal in culture, economics, medicine and politics to ignore the capitalist patriarchal inheritance. In Donna Haraway's "Cyborg Manifesto" she criticizes earlier feminisms: especially second wave feminism, conservative, socialist and Marxist feminisms. In order to assimilate Haraway's attacks and proposals it is necessary to elaborate a preliminary study on the third feminist background of late 80s and early 90s. Many scholars have commented or debated Haraway's cyborg theory without

knowledge of the previous feminist theories she follows or objects. My research contributes to study of feminist and gender theory emphasizing the importance of reading and rereading previous and subsequent feminist theories before criticizing third wave feminist ideas.

Haraway's theories were clearly influenced by one of the most important works of the third wave and present day feminisms: *Gender Trouble* (1990) by Judith Butler. In her first work Butler enacted a very logical reason about women and men condition affirming that both sex and gender are constructed. This idea is inspired from J. L. Austin *How to Do Things with Words* (1962) and Jacques Derrida's "Signature, Event, Context" (1971) as well as Paul de Man's notion of "matalepsis" in *Allegories of Reading* (1981). Butler revolutionized the concept of gender creating a fusion of feminist insights into linguistic theories.

In Gender Trouble: Feminism and the subversion of Identity, Butler denaturalizes gender categories by proposing that they are performative; That is, gender is part of an overall structure of power that can be disrupted by individual agency (Xiana Sotelo, 342)

Like Judith Butler, who does not believe in purely feminine or masculine behaviors but "performative" acts which follow rituals imposed by culture and society, Haraway also rejects the idea of the situation of all women as a universal one. Haraway criticizes some of the second-wave determinations. Haraway responds to the essentialist feminism rejecting any theory which identifies the constitution of gender identity or patriarchy, universal, historical and necessary. For Haraway:

There is nothing about being 'female' that naturally binds women. There is not even such a state as 'being' female, itself a highly complex category constructed in contested sexual scientific discourses and other social practices. Gender, race, or class consciousness is an achievement forced on us by the terrible historic experience of the contradictory social realities of patriarchy, colonialism, and capitalism (Haraway 155)

For Haraway a cyborg has a changing identity and feminists should create coalitions based on affinity rather than on identity. Haraway supports Chela Sandoval's theory on "oppositional consciousness" (1984) arguing that feminists had suffered breakdowns because of insisting on the idea of unity rather than on multiplicity: "Painful fragmentation among feminists (not to mention among women) has made the concept of woman elusive" (Haraway 155), and women of color contribution to feminism is essential to transform the old colonialist way of thinking. If we read the text Haraway's is referring to: Chela Sandoval's "U.S. Third World Feminism: The Theory and Method of Oppositional Consciousness in the Postmodern World" we will realise that what she is supporting is that it is essential to consider the distinction of some women to others as positive. "Oppositional consciousness" consists of the opposition to the dominant social order:

I propose that the hegemonic, feminist structure of oppositional consciousness be recognized for what it is, reconceptualized, and replaced by the structure which follows. [...] Those subordinated classes which have sought subjective forms of resistance other than those forms determined by the social order itself (Sandoval 2-3, 10-11)

Admitting that there are many feminisms and women have different needs depending on their culture, religion, philosophies, history, profession, background, etc is one of the most appropriate positions that some third wave feminists like Donna Haraway defends. Haraway coincides with Katie King in the idea that taxonomizing -classifying into categories- the feminist movement into liberal, radical or socialist only creates a battle

among different political tendencies. She compares Sandoval's theory of "oppositional consciousness" with cyborg policy. She criticizes popular feminist 80s tendencies like those of Catharine MacKinnon (1982-1987), anti-pornography feminist, whose error, according to Haraway was to develop an authoritarian doctrine making a feminist consciousness of the non-existence of women in public life, except as desire products addressed to men. Haraway disagrees with the opinion of certain socialist Marxist feminists who tried to eliminate the polyvocal difference from the anti-colonialist discourse. For her, MacKinnon erases every possibility of differentiating between some women and others.

With regards to Haraway's view, I think that it is necessary to clarify that Catharine MacKinnon tried to defend women's rights towards justice. She affirmed that women's public presence, voice and representation has been negated (*Towards a Feminist Theory of the State*, Mackinnon, 285). However her mistake, as Haraway criticizes, was that she considered all men the same with statements like: "Pornography permits men to have whatever they want sexually" (122), this sentence is ambiguous because not all men like pornography or at least they do not enjoy the same kind of pornography. MacKinnon considered patriarchal prejudices as universal and this view impoverished her arguments. Furthermore, nowadays third wave feminists consider pornography made by women as free expression and censoring pornography would imply repressing and neglecting women and men freedom to enjoy subversive and non-normative sexual practices.

Haraway continues her manifesto explaining that the use of the new technologies is going to revolutionize biology, medicine, industry and society. From her point of view capitalist white patriarchy is going to be substituted by the "Informatics of Domination" (Haraway, 161). Posthumans in new technologies will create an environment of exchange and mobility, but at the same time there will be still social discrimination for women and particularly for those in Third World countries:

These developments are neither gender- nor race-neutral. White men in advanced industrial societies have become newly vulnerable to permanent job loss, and women are not disappearing from the job rolls at the same rates as men. It is not simply that women in Third World countries are the preferred labour force for the science-based multinationals in the export-processing sectors, particularly in electronics. [...]The ethnic and racial diversity of women in Silicon Valley structures a microcosm of conflicting differences in culture, family, religion, education, and language (Haraway 166)

Haraway envisages the future as a place where everything will depend on electronics: international corporations, military power, politic processes, bodies in medicine, labour division and even pornography and religious evangelism (Haraway, 165). She concludes with a reflection on the myth of the cyborg as a political identity, she names feminist utopia writers such as Joanna Russ or Octavia Butler arguing that they create our politic imaginary. Haraway mentions ecofeminists warning that they are not adapting to our millenium circumstances:

American radical feminists like Susan Griffin, Audre Lorde, and Adrienne Rich have profoundly affected our political imaginations - and perhaps restricted too much what we allow as a friendly body and political language. They insist on the organic, opposing it to the technological. But their symbolic systems and the related positions of ecofeminism and feminist paganism, replete with organicisms, can only be understood in Sandoval's terms as oppositional ideologies fitting

the late twentieth century. They would simply bewilder anyone not preoccupied with the machines and consciousness of late capitalism (173)

These lines can only be understood if it is taken into account that although ecology is essential, if technological garbage is recycled the trade and the use of these technologies does not necessarily imply an increase of pollution. Cyberfeminism and ecofeminism can converge because the use of the new technologies can be a means of sustainability: computer devices can be recycled and electronic books avoid deforestation. Haraway finishes her manifesto with a sentence which has become popular within feminist theory: "I would rather be a cyborg than a goddess" (181) with which she summarizes her idea that the solution is not a regression to genesis or rebirth but a reconstruction of the human being. The future human being should be a genderless monster, a cultures mosaic, who would speak different languages and have different discourses and not only the phallogocentric code.

In the same year of the publication of Haraway's "Cyborgs Manifesto", an Australian women's collective called VNS Matrix (pronounced Venus Matrix) wrote their "Cyberfeminist Manifesto for the 21st Century" (1991). They followed Haraway's ideas: the reinvention of nature and social conventions, the rejection of patriarchal traditions and the acceptance of new multiplicities in sexual relationships in which any sexual choice is possible. They used a subversive language that could not be categorized of female or male. Their artistic works were made by software tools, they were published on the Internet and therefore, any kind of reader, inside or out of the academic environment could have access to them.

We had different background of poetry, video, writing, performance. At that time I was doing Women's Studies. I was very influenced by people like Foucault. We were interested in how to combine popular culture and cyberpunk. We wanted to have fun, being feminists without rejecting pleasure ("Riot Girls Techno Queen", "VNS Matrix" Julianne Pierce n/p)

With this "without rejecting pleasure" Julianne Pierce refers to the sexual content of their works. At this state, many third wave feminists had overcome the battle of sex-positive feminists and anti-pornography feminists and fostered women sexuality: heterosexual, lesbian and transsexual expressing sexual desire and considering the sexualized body as a symbol of freedom. The female body had been objectified in the Media and in every cultural manifestation, VNS Matrix represented women as strong and fearless who were proud of their own bodies as well as celebrated that they were the owners of their bodies. From 1991 to 1997 they presented artistic installations, events and public art works in Australia and internationally. They were some of the first artists to make experiments with new media art, photography, sound and video. They designed panels of graphics of videogames addressed to women: *All New Gen* and *Bad Code*. In both of them heroines had to kill symbols of patriarchy to win the game, this was a strategy to vindicate videogames addressed to girls and denouncing gender violence in a satirical and provocative way. VNS Matrix made Internet art, manifestos and panels of feminist videogames to enter into backgrounds that had been traditionally considered male areas. VNS Matrix were interested in creating spaces where women could empower themselves and stop being discriminated from the symbolic cowboy's cyberspace that William Gibson had illustrated in *Neuromancer*. Cyberpunk novels supposed the beginning of inflection and crisis in masculine subjectivity. In *Neuromancer* all characters are cyborgs, female and male are penetrated by technology, by information, by

biological implants or by genetic manipulations. For Haraway a cyborg world might be one in which people are not afraid of permanently partial identities and contradictory positionality. "Haraway asserts that some differences are playful and that some are roles of world historical systems of domination" (Steffensen, "Slimy metaphors for technology: 'the clitoris is a direct line to the Matrix'" n/p). The objective of VNS Matrix was to subvert the androcentric all together activities on the Internet and looked for a representation of women as strong and active as men.

We wrote the Cyberfeminist Manifesto for the 21st Century, had it translated into Japanese and Spanish (and later into French, Finnish, Russian, Italian, Dutch) and began infiltrating cracks in the patriarchy, twisting the tender tentacles of power of Big Daddy Mainframe to create a vision of the future which was "technotankgirltopian". We were ignorant of the work of Sadie Plant in the UK who was also constructing a notion of cyberfeminism and when we finally heard of her work. We started pumping out new viri into the mainstream Australian media, describing this new wave of brave new girls, machine queens and their perverse pleasures (Domínguez "An E-terview with Doll Yoko" n/p)

Their main goals were: to dismantle the domination discourses in virtual as in real places, to denounce gender violence acts from all around the world and to enact women's artistic creations on the Internet. These three aims showed a strong influence from Donna Haraway's "Cyborg Manifesto" (1991) and Sadie Plant's *Zeros and Ones* (1997). VNS Matrix were interested in showing women's strength, sexual desire and power, all characteristics that had been attributed to men in patriarchal societies. History has been considered male, while nature has been associated to female. The differences between men and women have been biological. VNS Matrix found their place in technology, where identity does not rely on the body, but on abstract thought.

Cyberfeminist theorists, such as Donna Haraway, Sadie Plant and Zoë Sofoulis, imagine and articulate a different relation between body and machine, and between women and technology. This theoretical trajectory is based less on an hierarchical dualism between dominant megamachines and submissive bodies and more on a transgressive strategy and politics which imagines and constructs a perverse alliance between women and machines (Steffensen, "Slimy metaphors for technology: 'the clitoris is a direct line to the Matrix'" n/p).

VNS Matrix writings had a very paradoxical discourse. Their register was completely colloquial, but their manifestos and artistic works had a highly intellectual academic value. Their writings had an anarchic structure, they supported civil disobedience: plagiarism and hacktivism. They examined the acquisition and application of power and showed interest for international politics against patriarchy.

In 1991 they started by writing their "Cyberfeminist Manifesto for the 21st Century". The manifesto was distributed on street posters around Adelaide, then it was published on the Net and in the end it was known internationally. It was an obvious allusion to Donna Haraway's "A Cyborg Manifesto: Science, Technology, and Socialist- Feminism in the Late Twentieth Century", published during the same year. Haraway's manifesto was serious and academic. She was a professor of Feminist Theory and Technoscience, who had earned a degree in zoology and philosophy. Understanding completely the manifesto required a previous knowledge of socialist feminism, Judith Butler, Catharine MacKinnon, Chela Sandoval, etc. Whereas the manifesto by VNS Matrix did not require any previous

knowledge because the language was very casual and the length was only eighteen lines. However, having read some cyberfeminist literature provides a better understanding and appreciation of this experimental manifesto as it will be seen later. Haraway's "Cyborg Manifesto" was published by Free Association books and on the Internet at the same time. On the contrary, VNS Matrix' manifesto was only on-line and probably due to a general rejection of electronic literature promoted by technophilia and a luddite position, scholars did not pay much attention to a text that looked more like a joke than to a public declaration of women's freedom of speech.

The "Cyberfeminist Manifesto for the 21st Century" had a scandalous language: direct, impulsive, clear and determining. It was characterized by the use of four letters words, the absence of punctuation and capital letters, the absence of discourse markers and lack of coherence and cohesion. Deliberately, VNS Matrix wrote a manifesto anti-norms, "anti-reason" as it is affirmed in itself; it did not respect any linguistic norm either. The only capital letter we find in the text is the first letter "W" of the word "We", and the name of the group in the middle of the text: VNS MATRIX. Humor and parody in the text make allusion to cyberculture. The sentence: "the clitoris is a direct line to the matrix" ("The Cyberfeminist Manifesto for the 21st Century", n/p) has a double-meaning. After the publication of the manifesto Sadie Plant explained the connection between matrix meaning "womb" and cybernetics in *Zeros and Ones*. Matrix is the Latin term for womb, a word that was *hystera* in Greek. In computing science, matrix is a collection of data items that can be selected by indices computed at run-time.

The use of misspelling and a discourse lacking cohesion was also intentional and significant in VNS Matrix writings; their aim was to change the codes as they declared: "corrupting the discourse" (VNS Matrix n/p). They tried to find their own use of language, this reminds to French feminists support of a feminine language in the second wave when Hélène Cixous, Monique Wittig, Luce Irigaray, Chantal Chawaf, and Julia Kristeva theorized about the existence of an *écriture féminine*, affirming that there was female difference in language. These French feminists considered that not only women could have this kind of *écriture féminine* but also some male authors. "In her polemical, passionate essay "The Laugh of the Medusa" (1975), Hélène Cixous coined the phrase *écriture féminine* to designate nature of women's sexuality, thought and imagination" (Holmes 216). VNS Matrix on the contrary, do not use a "feminine" style, they use blasphemy, irony and humor in response to the traditional idea of women as "feminine subjects".

Use of irony and blasphemy as feminist weapons are techniques that Judith Butler will vindicate subsequently. "As Judith Butler lucidly warns us, the force of the parodic mode consists precisely in turning the practice of repetitions into a politically empowering position. Parody can be politically empowering on the condition of being sustained by a critical consciousness that aims at the subversion of dominant codes" (Braidotti "Cyberfeminism with a difference" 112). According to Iñaki Martínez gender parody can be useful to evaluate the efficiency of this rhetorical strategy to resignificate the political side of it: "As a subculture, parody, more than suggesting a revolutionary program, an alternative—which is what characterizes counterculture—recodifies cultural signs" (Martínez, Translated from Spanish by Maya Zalbidea Paniagua, 30).

The main ideas of VNS Matrix manifesto are: the defense of art made by women, the incorporation of women's participation on the Internet and the elimination of the patriarchal

discourse to create a new one. "Cyberspace in VNS terms is re-appropriated from a symbolic order of masculine rationalist high-tech domination and recoded as feminine" (Steffensen "Slimy metaphors for technology: 'the clitoris is a direct line to the Matrix'" n/p).

In 1996 VNS Matrix published the "Bitch Mutant Manifesto", a text full of technophobic connotations. It resembles more a poem than a manifesto due to the inversion of word order, metaphors, irony and symbolism. Cyberspace is represented as a futuristic place with atomic winds, "where code dictates pleasure and satisfies desire" ("Bitch Mutant Manifesto", n/p) A place in which what exists on the Internet is what really exists and governs the individual's interests. There is a strong criticism about the fact that undeveloped countries cannot use the new technologies: "So what's the new millennium got to offer the dirty modemless masses? Ubiquitous fresh water? Simulation has its limits. Are the artists of oppressed nations on a parallel agenda? Perhaps it is just natural selection?" ("Bitch Mutant Manifesto" n/p). In the end of this digital text there is another allusion to Haraway's Cyborg Manifesto because it is stated that a rebel child is born from the patriarchal society. Patriarchy is personified by "Big Daddy Mainframe": "The net's the parthenogenesis bitch-mutant feral child of big daddy mainframe" ("Bitch Mutant Manifesto" n/p). Big Daddy Mainframe as Julianne Pierce explained to me symbolizes patriarchy ("Personal Interview with Julianne Pierce by Maya Zalbidea Paniagua" 2010, n/p). Also this "Bitch Mutant" is born from parthenogenesis as Haraway's cyborg symbolizing a modern kind of reproduction: artificial insemination. Definitely in this second manifesto VNS Matrix express the importance of hacktivism for cyberfeminists to penetrate into the World Wide Web to corrupt inequality. They claim: "We are the malignant accident which fell into your system while you were sleeping. And when you wake we will terminate your digital delusions, hijacking your impeccable software" ("Bitch Mutant Manifesto" n/p).

The last projects by VNS Matrix were 3-D graphics of videogames for girls: *All New Gen* (1995) and *Bad Code* (1996). Both criticized patriarchy and capitalism. In *All New Gen*, the mission is to sabotage the databanks of the insidious Big Daddy Mainframe, which represented the abuses of power of sexist white rich men. *All New Gen* is assisted on her mission by the DNA Sluts, a band of sexy renegade Sheroes; along with ferals, data deviants, cortex crones and code warriors. In the game there are sexual acts that represent new sexualities and subjectivities in heterosexual, homosexual and bisexual relationships.

Five years after the publication of The "Cyberfeminist Manifesto" online, Rosi Braidotti published another essential contribution to cyberfeminist theory, her essay: "Cyberfeminism with a difference" (1996) in which she insisted on the feminists' disappointment of virtual reality in which sexism was still present, "this new technological frontier will intensify the gender-gap and increase the polarization between the sexes" (Braidotti, p.112) Rosi Braidotti analyzed the use of irony and parody of Riot Grrrls as a feminist strategy:

The ironical force, the hardly suppressed violence and the vitriolic wit of feminist groups like the Guerrilla or the Riot Girls are an important aspect of the contemporary relocation of culture, and the struggle over representation [...] The riot girls want to argue that there is a war going on and women are not pacifists, we are the guerilla girls, the riot girls, the bad girls. We want to put up some active resistance, but we also want to have fun and we want to do it our way. The ever increasing number of women writing their own science fiction, cyberpunk, film scripts, 'zines', rap and rock music and the likes testifies to this new mode (Braidotti 113)

The following publication about cyberfeminism was Sadie Plant's *Zeros + Ones, Digital Women + The New Technoculture* in 1997 in which she defended the importance of women's historical contribution to technology revolution. Sadie used the figure of Ada Lovelace to vindicate the importance of women's contribution to the new technologies. Lord Byron's daughter was the inventor of the first analytic machine which was the first example of the future computer programming. Ada's mother was a mathematician and became an analyst. Ada invented the first analytic machine able to do mathematical operations before being ordered by the user. She knew she was a prophet and her discovering was going to change arithmetic's methods, but she could not develop her machine completely. She worked with Charles Babbage, an engineer, and they created the machine. Nevertheless, they could not finish because of lack of funding, advertising, Babbage's eccentricism and Ada's health problems. Posthumously her discoveries were recovered and used for the invention of hardware (Plant p. 10-15). Sadie Plant criticized Freud's cynicism affirming that women had made poor contributions to inventions and discoveries in our civilization. According to Plant when Freud was looking at his daughter Anna weaving, he thought of her as "bound to weave a costume for a masquerade... an actress, a mimic, an impersonator, with no authenticity underneath it all" (Plant 25). According to him the only technique that women had invented was knitting. He made this assumption looking at his daughter knitting. Due to these ridiculous ideas about women's deficiencies, Sadie Plant emphasizes how Gilles Deleuze and Félix Guattari considered that Freud was wrong with regards to women's psyche. The volume that Plant was probably referring to was *Anti-Oedipus* (1972) in which they criticize that Freud's concept of family consists of the traditional and sometimes repressed model of mother and father. Deleuze and Guattari argue that underneath the pseudo-opposition between family (composed of personal subjects) and the social world, lies the relationship between pre-individual desire and social production. Plant dedicated a chapter to Socrates' theory of the soul. For him, the soul was something that distinguished men from the rest of species and women, because only men had soul.

According to Plant, Freud affirmed that women were empty, they did not enjoy sex. Freud referred to women's sexuality in a negative way, according to him they suffered "penis envy" on his *Three Essays on the Theory of Sexuality* (1905). Jacques Lacan symbolised woman as the "no-total, no-one", for him she did not have any place except the place of the Other, that he called O. Sadie Plant played with this idea saying that in computing science man is the one, represented by 1 and woman is the zero, 0.

Sadie Plant persuasively shows how women have always been inextricably involved with technology. Using the telephone operator as an example, she argues that women have traditionally comprised the laboring core of networks of all kinds, particularly the telephone system. From the power loom to typewriting, even to the discovery of computer "bugs," Plant categorizes technology as a fundamentally female object. She argues that women are intelligent machines, that the robotic is feminine, that the zero--the nothingness of binary code--has always been the 0-ther, the female (Galloway n/p)

Plant described the dichotomy of cyberspace with regards to freedom and equality. Like Donna Haraway she commented on the Internet's utopia as a place that could be a new beginning, far from the claws of patriarchy. "Cyberspace is the purest of the virgin isles, it is a reality designed according to human specifications, ready for a never ending colonization process" (Plant p. 179). However, cyberspace has continued reflecting a sexist reality: the presence of women as sexual objects in advertising and the sexual exploitation of children

(especially girls) in pornographic websites. Men still have the highest working positions in new technological industries while women keep on suffering a precarious situation in Western countries and other Eastern ones where technologies are developed such as in China, Taiwan, Thailand, etc.

Sadie Plant's Zeros and Ones engages with Western philosophy's reliance on binary sexual difference – which renders the "eternal feminine" as either inscrutable or invisible – and the erasure of women's activities in history. She views the multiple, layered, and relational "nature" of computer technology as complementary to women's contributions to the sciences, which developed from complex and often hidden/erased positions. (Melzer, p. 21)

While Plant's book was being read, simultaneously the cyberfeminist women organization OBN (Old Boys Network) celebrated the first international cyberfeminist conference in Kassel. Their aim was to write a definition of the cyberfeminist school of thought but they did not want to enter into taxonomies, therefore they wrote the *100 Anti-Thesis of Cyberfeminism*. Among these anti-theses we would like to emphasize eight sentences that have a special intention: "cyberfeminism is not ideology, cyberfeminismus ist nicht post-modern, cyberfeminism is not exclusive, cyberfeminism is not anti-male, cyberfeminism ist keine theorie, cyberfeminisme n'est pas une pipe, cyberfeminismo no tiene cojones, cyberfeminism has not only one language" ("100 Anti-Theses" Old Boys Network). The first aspect that draws our attention is the use of different languages as well as different registers in the same text, something that conventionally would be considered non-academic or inappropriate. The reason for this mixture of languages is explained in the last sentence, "cyberfeminism has not only one language", this statement echoes Haraway's idea of the loss of an old patriarchal language. "Cyborg politics is the struggle for language and the struggle against perfect communication, against the one code that translates all meaning perfectly, the central dogma of phallogocentrism" (Haraway 177). OBN website is still online and the most famous cyberfeminist texts have been filed for their preservation and for the Internet users free access. On the first page of the website it is written: "The mode is the message-the code is the collective!" (OBN n/p) which may be an allusion to Marshall McLuhan's famous expression: "The medium is the message" meaning that the form of a medium embeds itself in the message, creating a symbiotic relationship by which the medium influences how the message is perceived. OBN support feminism in which the form creates meaning and the code is created collaboratively. The term code has two meanings, one is the conventionalized set of principles and in Computer Science the code is the system of letters and symbols. OBN claimed for the use of the new technologies to improve women and men interconnections and the disruption of feminists on the established system to transmit pro-equality messages, create new moral "codes" by "coding", this is, writing computer programs.

It is interesting to remark that cyberfeminism wanted to break with traditional feminisms. Donna Haraway's "Cyborg Manifesto" supposed the beginning of a new postfeminism that criticized old feminist beliefs such as: women and men are opposites or women of color are different from white women. Haraway believed in Chela Sandoval's theory of oppositional consciousness:

"Chela Sandoval (1984), from a consideration of specific historical moments in the formation of the new political voice called women of color, has theorized a hopeful model of political identity called 'oppositional consciousness', born of the skills for reading webs of power by those refused stable membership in the social categories of race, sex, or class" (Haraway, p. 155)

The last most important theoretician of cyberfeminism is Sandy Stone, Donna Haraway was her professor. In "Will the Real Body Please Stand Up?" (1991) Stone analyzed the models of gender in cyberspace, in which each user can change gender constantly:

A woman who has appropriated a male conversational style may be simply assumed to be male at that place and time, so that her/his on-line persona takes on a kind of quasi life of its own, separate from the person's embodied life in the "real" world (Stone, p. 82)

Stone terms this phenomenon: "Schizophrenia as Commodity Fetish". According to Stone individuals lose their flesh in cyberspace, the Platonic idea of the soul's jail would disappear in virtual life, but all the same, gender differences remain. Stone senses that the concept of body is old and Cartesian, and therefore women and minorities are not interested in the disappearance of the body. On the contrary, feminists, as we have seen are interested in their visibility in public spaces.

In 1999 Faith Wilding and María Fernández founded a collective called subRosa. In subRosa official websites interdisciplinary feminist artists combine art, social activism and politics to explore and criticize information intersections and bio-technologies of women's bodies, lives and jobs. María Fernández in "Is Cyberfeminism Colorblind?"(2002) questions the absence of color women in the international conferences in previous cyberfeminist meetings. According to Fernández in the First International Cyberfeminist Conference celebrated in Hamburgo on December 2001 it was proclaimed that RAWA members, a group of Arab cyberfeminists participated at the end of the conferences. Suspiciously, RAWA members were not invited to come before their intervention and they missed previous panels and debates. The organizing committee used the excuse of the English language, arguing that those previous conferences were in English, but later it was discovered that RAWA members spoke English. Apparently, as María Fernández indicates the cause of this discrimination might have had something in common with September 11th events (Fernández n/p).

In order to eliminate separatism and discrimination of White Western feminists and color and Eastern feminists María Fernández and Faith Wilding founded Subrosa with the aim of opening a space where relevant topics could be debated by color women. The main subjects discussed by Subrosa deal with race, literature, digital art and assisted reproduction (or artificial fecundation). Present day they keep on organizing workshops and cyberfeminist conferences.

4. Cyberfeminism as international activism

Nowadays cyberfeminists use the Internet as a useful tool to denounce gender violence cases in the world: domestic violence, genital mutilation, incest, sexual traffic, children exploitation (whom most of them are girls), immigrants in pornographic websites, etc. At this point I would like to show the cyberfeminist practice, its international impact and its positive results in women's visibility and some rights achievements.

Before the OBN International Conference in Kassel, in 1997, in the IV Women Worldwide Conference in 1995 in Beijing the First International Cyberfeminist Practice took place. As the Spanish cyberfeminist journalist Montserrat Boix informs, a group of 40 women from 24 countries provided formation and support to 1.700 users in 18 languages (Boix n/p). Women from all places of the world followed on-line debates and projects of the conference

without needing to leave their houses in real time. The same year numerous cyberfeminists created a website called FACES, it is an international website for women of the media and Computer Sciences: artists, programmers, theoreticians, designers, curators and DJs, among others, in the diversity of the digital field (FACES n/p).

Present day feminists inform about conferences and meetings on women in the new digital environment and other gender issues in social networks, blogs and digital newspapers. Women use new technologies to find information about their citizen rights, to help each other to find a job position, to subscribe in feminist associations, vindicate gender and social injustices in their personal blogs, publish their artistic or literary works with feminist content -without needing to be accepted by publishing houses or institutions which may show no interest in women's issues-, etc. We can also find online statistics of the number of women who are presidents, scientists, writers, artists and composers in the world, the number of victims of gender violence, femicide, etc. Cyberfeminism is growing up and we count with numerous women websites in the world. Some cyberfeminist theorize, others create art and literature, others are Internet activists, others are hacktivists -they enter into public website as hackers to dismantle media lies- and others organize workshops and activities that improve women's participation in cyberspace, which has become one of the public spaces more visited in the 21st century.

New technologies are used as empowering weapons in Western as well as in Eastern countries. An interesting example: in 1999 a women group in South Asian created "The South Asian Women's Forum for Men and Women" (South Asian Women's Forum) this website is still working nowadays and the information it includes is updated. In this website we can read opinions of women and men about nowadays issues in the South Asian world such as: new fertility options, children's rights — in 2006 a law banned children younger than fourteen years from working — etc. One of the main researchers of women websites in South Asian is Radhika Gajjala, interested over all in discussions about Third World women. Annapurna Mamidipudi collaborates too, researching on socio-cultural and economic structures to have access to emerging technologies.

As far as African cyberfeminism is concerned, it is important to emphasize the website *allafrica.com* and in which there is information and women's publications about education, equality and gender. Another example of African cyberfeminist website, French speaking in this case is *famafrique.com* which visibilizes feminist actions by women organizations. In Latin America in 2009 EFLAC (Encuentro Feminista Latinoamericano y Caribeño) (The First Feminist Latin American and Caribbean Meeting) was celebrated, cyberfeminist issues were discussed. Other Latin women websites are : *Red de Modemujer.org* and the blog: *generoconclase.blogspot* in which Hispanic speaking women vindicate equality by means of news and articles about Pastún women's hell in Pakistan, Palestine conflict, femicide, the international success of the feminist comic "Persepolis" by Marjane Satrapi, etc. In Brazil there is a feminist consolidated activist group: *Feminismo Negro Na Internet* empowering feminist actions, it is called Feminismo Negro and it includes useful information about racial and gender equality.

Basically in every country of the world women have created thousands of websites to promote women's participation in the new technologies in the last few years. There is a website on women and education for North and South Koreans *sookmyung.ac.kr*. Other cyberfeminist sites: in Russia *tac.spb.ru*, in Belgium *ada-online.be* the Canadian Women's

Internet Association: *womenspace.ca*, and numerous international websites in English language: *webgrrrls.com*, *feminist.com* etc. Besides, there is a wiki about gender studies: *wikigender.org*. The most recent cyberartists concerned with gender on the World Wide Web are the so-called *genderchangers.org*, a recent group which started in 2007 and organized their last workshop in 2010. They define themselves as women and women-identified gender minorities. "We belong to various generations and speak many different languages. What we share is a desire to shape the world we live in. As activists we make conscious choices about the technology we use" (*genderchangers* n/p).

With regards to Spanish cyberfeminism it may be interesting to highlight: *e-mujeres.net* and *mujeresenred.net*, and Montserrat Boix blog with updated information on the most recent news on feminism and free software. It also includes information about what she calls social cyberfeminism. Social cyberfeminism is about "joining women forces as the only possibility to reach the necessary empowerment to change the structures of patriarchy and achieve a more equalitarian world" (Montserrat Boix, Ana de Miguel, "Los géneros de la red: Los ciberfeminismos", n/p. Translated from Spanish by Maya Zalbidea Paniagua). In *Mujeres en Red* femicide cases are denounced such as the assassinations of women in Ciudad Juárez, campaigns for Afghan women or the situation of immigrant women all around the world.

Present day feminists use the new technologies as a means of communication, sharing information and free publication. On the Web all kinds of feminisms, -especially those which are the most recent such as ecofeminism, postcolonial feminism and trans feminism- can be found as well as other feminist activisms and theories which do not belong to any specific category. Most women and men who work on gender issues have similar interests: the eradication of patriarchy, gender violence and femicide. In cyberfeminist websites intersubjectivity works among feminists to promote the idea that every woman is different from all the others and therefore the only way a feminist can agree with other feminist is by sharing emotions. In Electronic Literature, New Media art and cyberfeminist projects the writer and participant on a work on line shares the same feelings of the writer and can even express them by writing a comment in some open hypertexts, Websites and blogs. This way, intersubjectivity represents a comprehensive emotional, intentional/motivational, reflective and behavioral experience of the other (López-Varela Azcárate 126). Although there may be a regression on feminist theory and activism and there is a current struggle among different feminist perspectives (conservative and progressive feminist ideologies, some feminist theories are based on studies of women and men while others are focused on queer theory, etc) women connected to the World Wide Web can create international groups easier than never before and are able to get information about feminist studies and political working groups which organize manifestations, strikes, social events and local assemblies.

5. Benefits of teaching cyberfeminist hypermedia

In a feminist hypertext there are some crucial differences which allow readers to find multiple entrances (and exits) through links and lexias. This multilinearity produced by links and lexias makes possible qualities which cannot be possible in linear writings. Those characteristics are beneficial in a gender studies environment because they offer: multiple voices and a decentering potential which erases hierarchies in discrepancy about gender matters or among different feminist streams. In *Towards a Vector Model of Hypertext Narrative* (2002) Ingrid Hoofd affirms that a hypertext "has links/trails that can work as a metaphor,

and that explicitly can visualise a 'stitching together' of what has been 'ruptured in societal discourses'" (Hoofd n/p). In texts about society's restrictions on gender the form of a hypertext illustrates how the self, as well as the hypertext, is fragmented and the reader needs to 'stitch together' the metaphors to understand the content. After the changing models of writing of poststructuralism and postmodernism present day readers have to face the fact that there is not only one "truth" but multiple ones and gender cannot be defined on the traditional patriarchal code. Hypertext's multilinearity allows contradictions in the text that eliminate the simple oppositions of male and female, black and white. The multilinearity nature of hypertext allows the layering of different voices and perspectives within one text. The importance of biographies and multiplicity of voices are not exclusive notions of hypertext, modernist and postmodernist fiction and nonfiction already exemplified multivocal novels. Mikhail Bakhtin writes about the dialogic, polyphonic, multivocal novel, which he claims "is constructed not as the whole of a single consciousness, absorbing other consciousnesses as objects into itself, but as a whole formed by the interaction of several consciousnesses, none of which entirely becomes an object for the other" (Bakhtin 18, quoted in Landow 56). Bakhtin considers the Dostoyevskian novel as a polyphonic literary form, a hypertextual fiction in which the individual voices take the form of lexias.

The multivocal novel is not something unique to hypertexts. Last few years feminists have written multivocal novels like Toni Morrison's *Beloved* (1987). A high percentage of feminist fiction and nonfiction is based on women testimonies: Alice Walker's *The Color Purple* (1982), Margaret Atwood's *Surfacing* (1972), Lee Maracle's *I Am Woman* (1988), etc. Nevertheless, feminist fiction in a hypertext counts with a series of elements which can illustrate equality messages in an innovative and powerful way: visual modes, images in motion and flashing graphics. A variety of typographies, colors and images in hypermedia reflect a particular mood and transmit a semiotic value. Multiple endings in hypertext fiction invite to the reader's reflection and can also be used as a feminist strategy to make the reader wonders how personal experiences are influenced by gender oppression, or on the contrary by gender subversion and freedom to choose a determinate kind of behavior and lifestyle. Besides, hypertext cyberfeminist fictions are written in a global environment and use a discourse which corresponds to present day gender and sexual issues: racism, femicide, immigrant women's issues, AIDS, transgender issues, etc. Thus, as Strickland claims: "E-lit is the mode of literature appropriate to new social conditions" (Strickland "Born Digital" n/p).

Collaborative authorship is being used more in hypertexts than in linear or/and printed texts and it benefits authors specially when a subject needs to be reinforced by multiple points of view to accomplish credibility, this is the case of gender matters which are treated by not only Western feminist authors but also other women from different ethnic origins and also men and transgendered people, such as in Shu Lea Cheang's *Brandon* (1998) and Francesca da Rimini's *Dollspace* (2007). In *Hypertext 3.0* George Landow claims that in a hypertextual environment, the figure of the author actually comes closer to the figure of the reader, because the reader becomes a more active co-producer of the text. Landow shows how both Roland Barthes and Michel Foucault problematise the modernist concept of the author. This concept closes off the text and plays down collaboration. Foucault, who coins the term 'author-function' to show how this concept is actually a mechanism of power in a (group of) text(s), argues that an author/writer is not just somebody who writes, but that the concept is highly socially and historically constructed. This author-function economically and culturally both exerts power and allows for empowerment. Foucault's critique allows Landow to theorise a much more

multiple concept of the author, and this in turn potentially dramatically changes power structures academic scholarship, allowing for explicit collaboration. Furthermore, since in hypertext the boundaries between inside and outside the text get more blurred, which Landow also relates Derrida's idea of decentralising and to his notion of intertextuality of a text, 'the' author automatically gets moved away from its central position in the text/the field of (academic) writings, to become (just) a 'node in an information network' (Landow 129).

From a feminist perspective Ingrid Hoofd sees these features as positive for all kinds of feminisms. The concept of the decentered self/author, together with the proliferation of the information technologies, can allow feminist theory to take up a more fruitful hybrid notion of (nomadic) subjectivity. Furthermore, the potential lessening of hierarchies between academic texts and the foregrounding of collaboration, that together with the hybrid space of the internet tends to blur the distinction between the public and the private, are of great value to constructing a more inclusive account of feminisms (Hoofd n/p).

Feminists have always been interested in making public what is private to transform the idea that "a personal case", like for example a victim of gender violence cannot be considered an exceptional case when it is statistically found that it is a common tendency. At the beginning laws to defend women who suffered domestic violence were addressed against husbands. Later feminists showed that not only housewives but also many other women needed to be protected from aggressions by boyfriends or other male partners. Gender violence was developed during the second wave of feminism to determine that private personal cases should be publicly spoken to protect victims and educate the population that violent acts were not only physical ones. And that intangible also worked to bring these issues into public attention. Feminist autobiographies hold onto the reality of oppression and challenge the unified, rational subject of the humanist tradition. Feminists reject essentialist and universalist ideas of the "self" and raise the voices of the "selves" and "subjects-in-process", subjects relating to the social and historical world. This term, "subject-in-process" was coined by Julia Kristeva (1984) and means that the individual subjectivity is in a continuous process of differentiation and there is not a unified self. What happens when one subjective state is shared by two or more individuals?

The fragmentation of feminist hypertext fictions counters the idea that texts are unified and self-containing. Readers of feminist hypertexts need to read several times the hypertexts, reflect on their content and need to spend some time and even research to figure out the text's meaning, and often there is not one single correct meaning. The gaps in the text create ambiguity and open doors of possibilities of meanings. Differences in interpretation are part of the process of textual reception, a process which involves the reader's own position as well as that of the author(s) of the text. Susan Sullivan, professor of literature, uses feminist hypertexts for teaching precisely because of its fragmentation and celebration of subjectivities. According to her:

Hypertext makes use of these strategies, as the text is fragmented and contains different types of information, emotional and conceptual, personal and social, historical and current, official and unofficial, rational and unconscious. These different types of information are connected in hypertext through juxtaposition, either within one page, as in collage, or through linked pages, as in filmic montage (Sullivan 36)

Hypertexts do not offer only one discourse like it happens in most of traditional narratives. In a hypertext each character speaks in the first person, generally addresses the reader and

makes rhetorical questions to induce the reader to create his/her own answers. Anonymity can also be an advantage of hypertext writing. Ingrid Hoofds considers hypertext as a genderless kind of writing, George Landow calls this phenomenon "Erosion of the self" and "reconfiguration of the author". Sometimes the gender of the writer is completely unknown, like the case of famous electronic literature authors and critics whose abbreviated names do not designate a male nor female identity.

Teaching feminist electronic literature permits the instructor and student to update gender issues and discuss them taking into account that this medium permits rearranging the hypertext, better organized analysis of intertextuality, studying through association and connections which is the way human brain works and using dialogue in class and at home. George Landow affirms that "technology always empowers someone. It empowers those who possess it" (335). It is our responsibility to use it in a useful way, not to follow patriarchal codes, but to share information and promote non-sexist works as cyberfeminists promote.

6. Conclusion

Cyberfeminism is evolving in different spheres. It started as cyborg feminism, science fiction creatures of the Cyborg Manifesto by Donna Haraway and it is becoming a tangible and visible reality because virtual life is going beyond all the frontiers to get real. An example of how cyberfeminism is improving communication, collaboration and activism among feminists is the case of the Integral Law of gender violence in Spain in 2002 thanks to cyberfeminist movements ("Hackeando el patriarcado: La lucha contra la violencia hacia las mujeres como nexos. Filosofía y práctica de Mujeres en Red desde el ciberfeminismo social" Boix n/p). Women still need to fight in order to obtain the same rights and socio-economic status as men, especially in countries like Iran, where cyberfeminism is penalized with imprisonment. For this reason it is essential to find new ways to eliminate inequality and discrimination against women, opening up new horizons and spaces.

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Social Exclusion and Inclusion of Young Immigrants in Different Arenas – Outline of an Analytical Framework

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1. Introduction

The more explicit focus on social exclusion in the social sciences began in the early 1990s in order to extend the focus beyond poverty by analyzing the relation between the individual and the society. One of the main initiators of this focus in social sciences at that time was Room (1995) known for his concept of multi-dimensional disadvantage, which included aspects such as material and physical surroundings. Much of the research on social exclusion since then has been policy oriented as it grew out of collaboration between the European Union and a research group that developed a set of primary and secondary indicators to measure the phenomenon. Despite these efforts, there are still controversies related to the definition of the concept. Some researchers also criticize the implicit moral metanarrative since it is built on the assumption that social inclusion or integration, as the opposite of social exclusion, is inherently good and desirable. As a result, efforts to tackle exclusion can often be led by normative assumptions about how social life should be organized, which ignores the ways in which the terms of inclusion can be problematic, disempowering or inequitable (Hickey and de Toit, 2007).

Of late, it has been common to speak of a *new* social exclusion perspective, which is better fit to analyze the more heterogeneous, multicultural and complex society (Body-Gendrot, 2002). As far as I can see, there have been few totally new focuses in the research on social exclusion during the last couple of decades, except for a much stronger focus on ethnicity and/or migration status compared to the mid 1990s. One example of this is the interactionalist perspective with its stress that instead of focusing on separate variables like education and income, it is more useful to focus on the intersection of variables such as ethnicity, gender and class background (for example, Modood, 2007). The relational and dynamical focus that Room proposed has been further developed within qualitative research. For example, Weil et al. (2005) underline the need to focus on relationships and interactions among and between excluded and included groups and communities, and state that it is important to include changes over time instead of static structural explanations. Another important contribution has been the transnational perspective of Wimmer and Schiller (2003), who criticize the national container focus of the social sciences (and social exclusion research definitely most often fall into this trap as well).

In this chapter, I will discuss relevant aspects for the understanding of social exclusion and inclusion of young immigrants in different arenas, thus underlining the multi-dimensional aspect of social exclusion (Room, 1995). I will distinguish between educational exclusion, labour market exclusion, spatial exclusion, relational exclusion and finally, socio-political exclusion. ¹

Social exclusion is a complex phenomenon and consequently, it is difficult to reach a joint agreement of how it should be defined. Nevertheless, the common trend is that social exclusion is defined in relation to education and work. For example, Raaum et al. (2009) define a young person as socially excluded at some moment in time if he or she is currently outside the structured arenas of school and work but also has a high probability of remaining outside in the near future. Atkinson (1998: 14, cited in Raaum et al., 2009) points out that 'people are excluded not just because they are currently without a job or income, but because they have little prospects for the future'. Social exclusion is a twosided process in the sense that it denotes both the instances, when a person is expelled from a community or a place *and* denial of access to 'outsiders'.

In addition, the concept can be used to denote symbolic forms of exclusion, such as being marked as different (Vestel, 2004: 428). These cases of 'othering' can vary from overt racism, to institutionalized ways of treating someone as 'different', such as special classes or projects targeted to specific groups of people (even though such strategies are meant as a help). We can distinguish between the *feeling* of exclusion and the more observable exclusion when actually not being allowed access (this can be on a legitimate basis when the person does not fulfil requirements of access or illegitimate as in discrimination) (Fangen 2006a).

In order to grasp the complexity of social exclusion, it is important to look for experiences of social inclusion among young people who appear to be marginalized. It is also important to look for experiences of social exclusion among young people who according to conventional standards are integrated (who have a job, who take higher education and who are included in social networks with people from the majority population). For example, some young Muslim women (even when in well-paid, high-status jobs) feel excluded if they are not allowed to pray during the work day or if they are not allowed to wear a hijab.

Traditional assimilationist theories of social exclusion seem to be based on the assumption that young people prefer inclusion to exclusion. But many young persons temporarily choose to stay outside the more institutionalized settings of society (Raaum et al. 2009). This might be related to an opposition to or a feeling of not mastering the behaviour demanded in a regularized school or work setting. For others, it is related to alternative prioritizations, such as the wish to explore the world by travelling to other countries or the fact that they become parents at a young age and therefore feel forced to temporarily stay outside the arenas of school and work.

Exclusion and inclusion are often presented as dichotomous variables, with marginalization as the unstable position in between (Raaum et al. 2009). According to this view, the marginalized person stands in the doorway: either he or she moves out towards exclusion or in towards inclusion. However, a more dynamic perspective that includes different arenas might open up the possibility that exclusion from one arena at the same time is followed by inclusion in another arena. In general, however, marginalization is more severe if a person loses his or her foothold in several different arenas at the same time (Room 1995). Some

indicators of social exclusion tend to occur at the same time, such as persistently low income levels (directly linked to having a job or not) and the access to jobs, health, housing and other factors associated with power and status. According to Room (1995: 235), it is important, both for policy and for explanatory purposes, to disentangle different elements of hardship and to identify the interrelationship, for example, between financial poverty and poor housing, between educational failure and lack of skills on the job market, between deprived childhoods and subsequent patterns of health and sickness. Most excluded are the ones who belong to a plurality of disadvantaged categories.

Generally, gaining access to jobs and education is a critical stage in the lives of young people. In some sectors of the labour market, young immigrants face greater barriers than young people without an immigrant background, due to employers' prejudices or their inadequacies, for instance, lack of language fluency. On the other hand, research shows that young people with immigrant backgrounds often have an extra drive, because they expect that things will be more difficult (Lauglo, 2000). Descendants with certain country backgrounds also perform better than the majority population. An integrated qualitative and quantitative perspective makes it possible to see the ways in which young people act and react on their situation, thus avoiding a 'blame the victim' explanation based on a one-sided focus on their lack of skills (van Dijk, 1992).

In order to reveal the complexity of social exclusion, it is important to study the experiences of young people from a variety of backgrounds. It is also important to look for transitions between inclusion and exclusion in an individual's life and analyze what it is that contributes to such transitions. By viewing social exclusion as a process, we do not fix the explanation to an either/or situation. With a lifespan focus we can consider the efforts of young immigrants to combat social exclusion, or we can see how in some periods they accept social exclusion and also willingly contribute to it.

In addition, the relational focus makes it important to ask questions like: Who is doing the excluding? Are there some specific people who exclude others? If so, are these other young adults of the same age, as in street racism, or is the exclusion made by the individual's own family as when a Muslim girl who is breaking the codes of proper behaviour is expelled? Or is the exclusion caused by people in positions of power such as employers, teachers, politicians, police or social workers?

2. Educational exclusion

There are vast differences in grades, drop-out rates and length of education between immigrants with different countries of origin. Some perform better than the majority population, whereas others perform worse. The main reason for these differences seems to be the fact that immigrants of different origins have different pre-migration class backgrounds and educational profiles (Modood, 2007). In Norway, Pakistani and Turkish young people more often drop out of school, and more often do not take up higher education, than young people of Indian and Vietnamese origin (despite the same length of residence) (Fekjær 2007). The main reason is found to be class differences among the parents from these different groups, but also significant are the different attitudes towards education. In this way, class and ethnicity (here in the sense of country of origin, which in reality does not always equal ethnicity) *interact* in producing distinct patterns of inclusion

and exclusion. Just as attitudes to schooling, to higher education and to financing education by means of loan, are influenced by class, so are they influenced by ethnicity (Fekjær, 2007; Modood, 2007).

Yet, the danger of presenting statistics of the performance of immigrants of different countries of origin is that it might reify a picture of each immigrant group. A qualitative study can be used to analyze the experiences of immigrants with one common country of origin but with different class backgrounds, with rural vs. urban backgrounds and with different migration trajectories. In Norway, immigrants from Somalia are more often unemployed and if employed have a low income, combined with having more children than all other immigrant groups in Norway (Henriksen, 2007). However, in my study of Somalis in Norway, I interviewed many young Somalis who pursued higher education. Common for all of these was that they had parents who also had taken higher education – either from the homeland or after coming to Norway, *or* their parents had held privileged positions in Somalia. This high level of education or status of their parents might have contributed to these young people having higher aspirations themselves (Fangen 2008). However, statistical data are necessary in order to say something conclusive about the meaning of parent's education for young adult immigrant's educational aspirations and achievements.

There are differences between first-generation immigrants who come as refugees and those coming through family reunion, as well as differences between those coming from war areas and those who do not have such experiences. This is partly a matter of having had any access to schooling before arriving in the host country, partly a matter of the extent to which one has experienced traumas or having or not having someone to relate to when arriving. Qualitative research can show how the migration history affects later educational performance, as well as experiences of inclusion and exclusion. There are vast differences in the experiences of those young immigrants coming from southern Somalia who had never attended school because of the war and some young immigrants from other countries (or other areas of Somalia) who had ordinary access to schooling in the home country before arriving in the country of reception. In many cases, however, child migrants learn the new language quicker than their parents, and it is the children who support the parent's learning. Some migrant parents who face barriers to insertion in the labour market also seek comfort in ethnic networks that might be counter-productive to active participation and consequently, they serve as poor role models for their children.

Among young men (both with or without immigrant background) who do not master the school setting well and feel stigmatized by the teacher or in general just bored of school, the tough guy, often inspired by the gangster or other sub-cultural images, is an alternative source of respect and status (Fangen 1998: 47; Moshuus 2007; Sernhede 2002; Vestel 2004). A young person who drops out of school and joins a criminal gang or a youth sub-culture instead is excluded from one setting, namely school, but included in another setting, namely the gang or the sub-culture. In Willis' (1977: 113) well-known study of white working-class boys in school, his main argument is that it is not the school that excludes these boys; they exclude themselves through the development of a counter-school culture which prepares them for the future on the shop floor. According to Willis, it is an element of self-domination in the acceptance of subordinate roles. However, this is experienced, paradoxically, as a form of true learning and as a kind of resistance.

But such an attitude towards school does not always appear as a collective reaction. In the *Weight of the world*, Bourdieu (2002: 61) writes about a young Moroccan man who has an illiterate father and a mother who is hardly able to write. Bourdieu argues that: 'Everything suggests that the organizing principle behind his rejection of school and the defiant attitudes that lead him towards, and gradually trap him in, the role of the "tough", is the desire to avoid the humiliation of having to read out loud in front of the other students'. In cases like this, the self-exclusion come about in order to avoid the humiliation of being excluded by others. The distinct multicultural community of the peer group is for some young people an alternative setting for inclusion, instead of school which is an arena where they do not feel comfortable.

All in all, lower class background seems to be the major factor to explain the higher drop-out rate and lower grades of immigrants compared to nonimmigrants. This may be related both to the importance of role models, but also to the degree of parental support and motivation. Parents' high expectations are one factor that explains many young immigrants' extra drive to perform well. For some however, the expectation that they will experience discrimination contributes to their lack of motivation to strive for further achievements.

3. Labour market exclusion

When assessing what factors contribute to a harder access to the labour market, there is often an emphasis of what the individual lacks, as regards experience, network, qualifications, proficiency in the majority language, knowledge of how the 'system' works and self-confidence. These factors create barriers for young people in general, but for young immigrants, an additional barrier in some cases is employers' reluctance to employ persons with visible minority background (Rogstad, 2000).

However, ethnic stigmatization can influence men and women differently. In some segments of the labour market, it seems that women with immigrant background have better access to jobs than men with the same background. It would therefore be erroneous one-sidedly to speak of a double disadvantage for women with ethnic minority background (Modood, 2007: 61). There is also an element of self-exclusion among young women with immigrant background as regards labour market. Statistical research shows that women with immigrant background have a decline in their employment over time, whereas the opposite is true for women without an immigrant background. One reason is that more women with immigrant background prioritize child rearing to active employment. Therefore, when they start to get children, they choose to work less or not to work at all (Brekke 2008: 61).

The problem for young immigrants of the first-generation is that they often do not have the network that leads to the right kind of jobs (Wiborg, 2006). Statistical research has shown that education reduces the risk of unemployment and it diminishes the income gap between people with or without immigrant background. The reluctance to employ young people with visible minority background is more prevalent in some parts of the labour market than in others. There are huge differences between immigrants of different origins when it comes to unemployment. Young migrants who have experienced war have greater difficulties with this. Living for many years in a society without any infrastructure, including a functioning

school-system, gives a person high qualifications, but these are the qualifications of how to survive from day to day (Fangen 2008). These skills are not easily convertible to the skills needed in order to succeed in a regulated labour market.

This is similar to what Weil et al. (2005) write on the problems of excluded youth adapting to a working identity. Many socially excluded young adults dream of a regular job, or even a job where they can be the boss. According to Weil et al. (2005), typical of many excluded young adults is that they resist authority and attempts by others to tell them what to do. Their dreams about a good job can be understood as part of a wider search for an idealized normality that includes education, work, a traditional family, spouse, children and house. For those who are marginalized, the wish to achieve this implies a dream that is exactly the opposite of the conditions in which they find themselves (Weil et al., 2005). Factors like unemployment, poor housing conditions and strained relations with family, friends and partners may be dashing these dreams against the rocks daily (ibid.). Weil et al. (2005) see the need for such dreams as a survival strategy. It enables young people to deny a present that might paralyze them altogether.

A factor typical of young adults who manage to avoid further economic and social marginalization and to benefit from the chances an individualized society provides is that they succeed in changing their strategies according to changing situations and circumstances. Young people who manage to alternate between unemployment, work and the educational system prolong the traditional adolescent phase, 'literally turning their life into an experience of lifelong learning' (Weil et al., 2005). Trying out possible options might function as a means of improving their competence to survive in ever changing situations (ibid.). Bourdieu (2002: 62) argues that young marginalized adults with and without immigrant background share every trait except ethnic origin. What some young people have in addition is an ethnic stigma inscribed in their skin or their facial features, as well as in their name, their clothes and their manners. These aspects intensify or radicalize the handicap linked to the lack of certificates and qualifications, itself linked to the lack of cultural and more specific linguistic capital (ibid.).

More than in other spheres, discrimination is a major barrier against young immigrants' active participation in the labour market. However, it is hard to document how huge this problem is, since it is difficult to control for the effect of all other variables, such as lack of qualifications, and so on. In the next section, I will focus on a sphere that is not so dependent on the individual resources, but rather on the collective ones.

4. Spatial exclusion

One concern of Room's (1995: 238) theory of multiple disadvantages is to widen the focus, by not only focusing on the resources of the individual, but to include also a focus on local communities. He argues that deprivation is caused not only by lack of personal resources but also by unsatisfactory community facilities, such as dilapidated schools, remote shops, poor public transport networks, and so on. Such an environment tends to reinforce and perpetuate household poverty.

Neighbourhoods can thus produce distinct forms of social exclusion. Bourdieu (2002: 124–25) points out that different social spaces are defined by their position relative to other sites.

The poor suburbs of Paris that collect the most disadvantaged groups contrast in every respect with areas of Paris where there is a concentration of the rarest goods and their owners. In France, large public housing projects were built in the French *Banlieues* in the 1950s to the 1970s, and the houses were filled with low-income immigrant families. A stigma became attached to these areas because of the fear of a 'cultural clash' and of downward mobility by white working-class families and added to this was the rapid decay of the buildings (Body-Gendrot, 2002: 373). Young ethnic minority men vandalized buildings and public amenities as a protest against the way projects were designed and maintained, as well as against the French state bureaucracy for putting tenants in the same identical mortar and concrete boxes without any sensitivity to ethnic and cultural preferences (*ibid.*).

The stigmatization of suburbs on the one hand contributes to a feeling of collective exclusion, while on the other hand, it can open up for alternative forms of inclusion based on the experienced sameness and common destiny of being foreigners in relation to the national state. The young men studied by Sernhede (2002) in one of Gothenburg's suburbs, did not see themselves as Swedish, but identified instead as 'blackheads', thus reinventing a racist term by making it their own resistant identity. Some of them also identified with the suburb as such. Sernhede sees a relation between these young men's unwillingness to participate in elections or in politics in general, and their experience of not being members of the Swedish society. Their felt powerlessness led to a fascination with violent gang culture and Afro- American hip hop, which again reinforced their hostility towards the dominant culture. Sernhede argues that the welfare state can diminish problems of inequality by different forms of social benefits, but it cannot solve these young people's experience of being outsiders in relation to the Swedish society. The hip hop sub-culture or even the suburb as a separate society within society, are alternative sources of community for some of these young people. This is similar to what Vestel (2004) found among the young men he studied in one of Oslo's North-Eastern suburbs. There was a 'community of difference', that was built around new practices of greeting rituals, language use, dress and music.

Among young migrants and descendants who live in Europe's suburbs, there are also many (especially those who have high ambitions as regards education) who do *not* identify themselves with the suburb because of its connotation of no future and of criminality and drug use. Young people define their own hierarchies between places, which are sometimes the same as the more dominant common sense hierarchies, but sometimes slightly different. Thus, different places and different arenas are linked to certain feelings of inclusion and exclusion, and for many young immigrants the high status areas of the city are the sites where they do not feel at home, and as the examples above show, this also appears true for some of those who take high status education. In addition to houses in these areas being too expensive for many immigrants, there is also an element of self-exclusion when young people with visible minority background choose not to spend their time in these areas, and later in life, do not aspire towards owning houses there. The ethnic segregation of the city marks a symbolic barrier against real class mobility of young immigrants.

For many adults, it is tempting to seek inclusion in their own ethnic community, whereas many of the young immigrants prefer multi-ethnic communities, and also communities that

are not too dominated by people with an immigrant background. For young people in general, the cities' educational and job opportunities are important pull factors for urban residency. The city is more multicultural and urban dwellers are more used to cultural complexity compared to people in smaller places. However, some small towns or rural communities have a particular welcoming attitude, e.g. related to a lack of workforce. Thus, in some cases, there is less exclusion in small communities than in large cities, and easier for immigrants to integrate.

All in all, spatial exclusion is a complex matter. Suburbs that serve as sites of identification and belonging for some, are at the same time exactly the places where other young people feel the outside world's stigma of the place as a burden they do not want to be associated with. Thus for the latter, the only way to escape exclusion is also to escape the collective barriers of the neighbourhood.

5. Relational exclusion

Ethnic segregation in housing areas and differentiated access to higher education and well-paid, high-status jobs in the labour market are exclusionary mechanisms at the macro level. But there are also many forms of exclusion in face-to-face social interaction, including more indirect forms of exclusion, such as subtle ways of watching, talking or in other ways relating or not relating to others. According to Taylor (1994: 25), our identity is partly shaped by recognition or its absence, and so a person can suffer if others mirror a confining or demeaning picture. The lack of recognition or being associated with categories that one does not identify with can inflict harm and be experienced as a form of oppression, as it imprisons the individual in a false, distorted and reduced form of being.

Some young people adopt such depreciatory images of themselves, so that even if some of the obstacles to their advancement fall away, they may be incapable of taking advantage of their own opportunities (Taylor, 1994). Such processes are sometimes seen among young immigrants, that they adopt the stigma to which their ethnicity is viewed by the majority (Eidheim, 1987; Lewin, 1948).

Also more defined social rituals can be perceived as excluding, as when the drinking pattern of young non-immigrants tend to exclude young Muslims who follow the prescription of their religion to avoid alcohol. Some young immigrants are vulnerable to the signals from non-immigrant persons, and misinterpretations occur. As for those persons who tend to ignore the young immigrants this does not need to be an action (or non-action) meant to hurt. Maybe the person not acknowledging the other is shy; or maybe he is just occupied by his own inner thoughts. There might also be norms of ceremonial distance, as Goffman (1967: 63) calls it, that the young immigrant is not aware of. Ceremonial distance is related to class background in the sense that 'the higher the class, the more extensive and elaborated are the taboos against contact'. Goffman describes several examples of non-person treatment, where people of higher status act as if the other was not there at all (*ibid.*: 67). Goffman analyzes the presence of avoidance rituals and presentational rituals in relation to differences of status and class background, but only indirectly touches the issues of ethnicity and racism related to such phenomena. Not to recognize the other through presentational

rituals might be an expression of racism, albeit not necessarily on a very conscious level. There might be an attitude that the other is not important, she is not an equal. This might also be linked to a certain form of embarrassment. She is a foreigner, and therefore the person does not know how to approach her. In order not to do anything wrong, he chooses not to recognize the other at all, which in effect might be more hurtful for the other than if he had chosen the wrong greeting ritual.

More outright exclusionary practices in face-to-face relations are various instances of racism. Many authors argue that when analyzing phenomena, such as exclusion, racism and humiliation, one must take into account how it is felt more than the intentions of those imposing it (Fangen, 2006b; Fangen, 2008). Some young people tend to downplay the importance of experiences of exclusion or racism or humiliation or even express understanding of them, while others tend to be oversensitive to such experiences and interpret all barriers as a result of racism or as humiliation (Prieur, 2004). This can be analyzed in relation to their situation in general, their social network, their class position, and so on (Fangen, 2008).

6. Socio-political exclusion

Structural or political factors such as restrictive immigration policies, the organization of the welfare system, the integration policies, and so on, are relevant in the search for factors that might lead to exclusion. In a previous article (Fangen, 2006b), I discussed how encounters between Somali immigrants and different public offices in Norway are often experienced as humiliating by the Somali immigrants. They feel that they are met with lack of empathy and of respect in these institutions, and interpret the advice received as 'you must adopt our way of doing things, which again is better than your way of doing things'. This also holds on a more macro level, in immigration policy. For young immigrants, the emphasis on the need for a restrictive immigration policy can be perceived as linked to the message 'you do not belong here'. Of course, the real arguments behind the policy are defined otherwise.

The nation state in itself is built on the distinction between *us* who are inside and *them* who are outside. The distinction between the included and the excluded is an issue of political controversy and debate (Heidar and Semb, 2007: 322). Citizenship is not only a juridical phenomenon, with enormous consequences for immigrants searching for a new start in life, but also a sociological and political phenomenon expressing an ever more complex relation between the individual and the state.

The acquisition (or denial) of citizenship is also a factor that feeds feelings of inclusion or exclusion. Undocumented immigrants and non-returnable refugees are in a special situation, as they are exempted from a number of rights, including social benefits (they only have the right to medical care and so-called emergency benefits). Some young immigrants remain in this situation for years, such as the non-returnable refugees who have received a negative answer to their request for asylum, but do not return because of ongoing conflicts and non-existent opportunities in their homeland. They feel that they have few other opportunities than criminality, since they cannot legally work (Sandberg and Pedersen, 2009).

In some sending countries, like Somalia, help to the sick, poor, unemployed, and so on, goes through the family or clan network, which means close and intimate contacts. By contrast, in the social democratic welfare state, public institutions have an important role in giving aid to the needy. These institutions can be characterized by inaccessibility and complexity, and it is not simple to feel recognition within the framework of these formal institutions (Fangen, 2006a).

It is important to not only focus on immigrants' integration (or lack of it) in the host society, but also on their access or lack of access to political status, rights and opportunities for political participation (Bauböck et al., 2006: 92). In a previous article, I have analyzed how young Somalis with different class backgrounds take different participatory roles, and some activate themselves in clan-based networks, others in Norwegian politics and yet others in transnational political activity (Fangen, 2007a; Fangen, 2008). Immigrants' exclusion and inclusion do not only occur within the borders of the nationstate, and the immigration policy is one out of several macro features that are not a result of national policies alone.

7. Conclusion

In this article, I have discussed different aspects of social exclusion in different social settings (Fangen et al. 2010). Quantitative research has shown that there is an obvious relationship between length of education and access to the labour market, and the general trend is that education diminishes exclusion in the labour market for young people with immigrant background. Young immigrants with no education after secondary upper school are lead towards temporary low-paid jobs (but so are young people without immigrant background). But young immigrants with higher education in some professions also experience hard access to the labour market, and immigrants from Africa have a harder access to the labour market than immigrants from other regions. Part of the explanation of this difference is that different migration trajectories lead to different positions in the host society. More immigrants from Africa than from other continents come as refugees. But discrimination also plays a role and African immigrants seem to be more exposed to prejudices among the majority population.

For first-generation immigrants, lack of fluency in the dominant language and knowledge about the 'system' can contribute to drop out from school and incomplete school certificates which in turn restricts access to higher education. This in turn will direct young immigrants towards lower skilled jobs in a labour market and for some will also lead to a state of welfare dependency (Fangen et al. 2011). On the other hand, for child migrants and descendants, school performance, length of education, and so on, equals that of young people without immigrant background.

Although higher education to some extent prevents against social exclusion in face-to-face contact, many young migrants and descendants experience being marked as different, although they have high-status educations. Having a well-developed network including both non-immigrant and immigrant friends, and who take higher education or have a good job, are in the best position to not be too vulnerable to the many humiliations in daily life (Fangen, 2006b; Fangen, 2008).

As an individual lives his or her life in many different arenas, analysis must reach beyond the borders of the local community, and the different arenas in which processes of social exclusion occur must be seen together. By not restricting the focus to only education or the labour market, but rather seeing inclusion and exclusion in these arenas together with young people's belonging or non-belonging and participation or non-participation in local communities, in gangs and peer groups, in families, in leisure activities as well as in civic and political organization, we can better understand social exclusion in young people's lives.

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Section 5

Security and Justice

The Conceptualising of Insecurity from the Perspective of Young People

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1. Introduction

Security is one of the basic needs; it can also be seen as a basic value in Western societies (Niemelä, 2000), where more and more systems are developed to guarantee security. Security is a highly valued goal, which may be difficult to reach because of different threats and risks in personal lives and in near and global environments. One indicator of the collective quest for security is evident in the literature and studies on different risks. Over a decade ago, Furedi (1997) wrote about the increase in the use of the word “risk” in literature and scientific research. This article participates in the discussion of insecurity and risks by focusing on the experiences of young people.

In order to understand young people’s perspectives, we need to focus on their experiences; we need to ask how they relate to society and how distant and global issues influence their world. This article argues that young people are key persons in reflecting the world and the changes in societies. Instead of reacting to the extreme examples of social problems or crimes involving young people, we try to understand how young people experience their personal and social lives, and the more societal and global issues. There is a need to develop social sciences empirical research among young people. It is important to know the role of security in young people’s lives and the sources and dimensions of their insecurity.

Empirical research on insecurity needs a theoretical and conceptual understanding of different approaches to security and insecurity. This article makes an explorative contribution to the concepts of insecurity and security from the perspectives of young people. Insecurity is a multidisciplinary concept; understanding of the concept demands different approaches. In addition, the article gives two empirical examples of research on insecurity among young people. By using both theory and empirical findings from quantitative and qualitative research, it is possible to explore the dimensions of the concept and its relevance in research.

2. The concepts of security and insecurity in social sciences

Insecurity and the experiences of young people in a changing society are relevant in social science research but security and insecurity are not simple as scientific concepts. Different fields of science address the topics. Psychology, social psychology and psychiatry provide

the earliest debates and notions about the need to develop these concepts. For example, Erich Fromm (2000) was one of the scholars who wrote about feelings of inferiority. He emphasized security as a need to belong and avoid loneliness. Alfred Adler (1964; 1971) analysed security as a basic need. A human being tries to choose goals so that they guarantee a niche, prevent feelings of inferiority, support self-esteem, and bring security.

One of the first efforts to bring these concepts into the realm of the social sciences was the critical analysis of the concepts of security and insecurity by Cameron and Mc Cormick (1954) who concluded that there was a lack of consistent definitions, theory development, and prerequisite empirical testing of the hypotheses. Cameron and Mc Cormick found previous research on security and insecurity vague and tendentious. They suggested concept development and empirical research.

It was almost two decades before the next analysis for these concepts appeared. One of the most profound analyses came from Kaufmann (1970) who wrote a comprehensive book about security as a sociological and social-political problem. The interesting feature of his analysis was that it presented security not only as a system or societal-level concept, but also as a subjective experience or as the relationship between subjective experiences and objective conditions. According to Kaufmann, the core problem of security was in the broken connection between inner experiences and outer conditions. The need for security manifested in efforts to defend and protect oneself against dangers, in needs for order and continuity, and in aspirations for inner, mental balance (Kaufmann, 1970, 24-27). Kaufmann's concept of security included both personal security of the "self" and orientation to an outer world.

Theorizing about the concept of insecurity has produced a wide variety of insecurity dimensions. One interesting question concerns the dynamics of this phenomenon. How does insecurity influence people and their relations in society? Berki (1986) provided a careful and holistic analysis of security and its creation and maintenance in society. He claimed that, in its deepest meaning, the desire for security was an existential drive. Berki (1986, 39) wrote, *"By wanting security, therefore, in order ostensibly (and consciously) to protect and prolong our lives, we are really courting insecurity, nay actually engaging in the quest after insecurity"*.

According to Berki (1986), personal security was closely connected to society and to personal, reciprocal relationships as well as to those people who we do not know. The social paradox of security means that people are vulnerable in their relationships, but in its extreme form, people may also see each other as threats and enemies. Security issues also present moral questions on how society is organized and how laws and rules govern security. Thus, security demands political decisions to alleviate insecurity in society and to guarantee security. The amount of legislation resulting from these demands can be huge in different spheres of life - in the areas of protection against crime and child protection, for example.

Berki's approach is fruitful for studying young people's insecurity because it focuses on the relationships and dynamics of security in communities and in societies. As previously mentioned, young people may be seen as threats or risks in a society, or as a protected group that is vulnerable to insecurity, but they can also be seen as active citizens who create and develop personal relationships and try to find their place in society. At the same time,

young people are challenged to develop personal security, to trust their close relationships, and to orient their lives to an outer world. This outer world or global world does not necessarily become more complicated; the complexity of life and the challenges just gradually unveil (Lahikainen et al. 1995, 42).

In Finland, Pauli Niemelä developed a research project on insecurity, its causes, and methods of coping; he analyzed the concept and clarified the different meanings for it. Niemelä (2000) developed a frame of reference for research on insecurity based on empirical findings in an extensive empirical study of the Finnish population. In his theoretical model, Niemelä differentiated six areas of security: 1) existence and health, 2) social relationships and community, 3) social security at the level of social security systems, 4) cultural and humanistic issues, 5) traditional security (inner security in a country and national security) and 6) modern, ecological security related to natural and manufactured environments.

It seems that these concepts of security and insecurity are important indicators to describe a person's relation to his or her community and to the world. They contain meanings regarding a person's orientation to society and to a changing world. Experiences of security or insecurity are not easy to explain but they can be connected to a variety of issues. According to McDonald (2002), security is not just ontological; it may change dramatically depending on the actor and the specific political and cultural contexts. This is in common ground with Pauli Niemelä's theoretical model of security.

Many approaches recognize the personal level of security as well as its connections to community, societal, and global issues. Discovering how the distant issues influence personal experiences of insecurity is a challenge.

3. Young people, insecurity and risks

When we focus on discussions about insecurity among young people, we find social scientific research on risks and risk societies, which give an interpretative frame of reference for understanding the experiences of people in a changing and unpredictable world.

The theories of risk society explain the societal and global contexts of security. Ulrich Beck (1986; 1992) is one of the most well known academics who started discussions in Europe and launched the concept a risk society. He criticized beliefs in progress and warned about new technological risks that cannot be controlled by old concepts and directives. Another well-known scientist, Anthony Giddens (1990), wrote about the new risks in modernity, which included threat of nuclear war, other military conflicts, and technological risks. He argued that these risk environments influenced all people; risks were globalized and people were aware of the risks as well as the deficiencies of experts in governing those risks (Giddens 1990, 124-125).

The most interesting issues in these approaches to a risk society are notions about the process through which a person becomes aware of and vulnerable to modern institutions and global issues. The development of identity is a reflexive project, from which close communities and traditions do not shelter an individual. People are vulnerable in their close personal relationships, and at the same time, they are aware of the threat in global issues. Giddens referred to Ulrich Beck's statement: "*The most intimate – say, nursing a child – and the*

most distant, most general – say a reactor accident in the Ukraine, energy politics – are now suddenly directly connected” (Beck 1986; Giddens 1991, 121).

The analyses of risks and risk society viewed this challenge not only as a person’s rational analysis of the world but also as risk consciousness, which meant living under the threat of hazardous uncertainty in a new cultural dynamic of anxiety (Wilkinson 2001, 4-5). Some of the interpretations of risk saw that risk itself meant feelings of fear, uncertainty, and anxiety (Lupton 1999).

Anthony Giddens (1991, 39-40) wrote about an individual’s quest for security in the risk society. He used the concept of trust to illustrate the relation between an individual and society. He argued that post-modern society challenged trust in many ways. He believed that trust and security were created in close relationships with caregivers and that, ideally, children trusted their caregivers and developed basic trust in a so-called protective cocoon, which protected a developing person’s integrity.

These sociological and other discourses on risks are not restricted to the experiences of younger generations. The strains of living with insecurity and impermanence, and the loss of personal control over life events are felt by most people to some degree (Abbott, 2000, 2; Wilkinson, 2001, 3). The perspective of risks and fears in young peoples’ lives, however, is the focus of the current research. Risks and fears are concepts closely related to insecurity and they help to understand the content, characteristics, and experiences of insecurity.

Quite often young people are mentioned as one of the most sensitive and vulnerable groups in society. Traditionally, this view is based on developmental approaches to adolescence and descriptions of youth as a transition period. The risk society approaches partly share these traditional and psychological views. Youth and adolescence are synonymous with transitions from childhood to adulthood, from school to work, or from dependence to independence (Cebulla 2009, 39-40). The core in these approaches assumes that young people are less likely to have common biographies and that everyday uncertainties are met individually, not with the support of community or tradition (Furlong & Cartmel 1997; Abbott 2000; Green et al. 2000; Miles 2007; Cebulla 2009).

Young people confront uncharted pathways into the future and they have to make decisions concerning their lives in circumstances where they cannot predict the consequences of their decisions. Young people must face the challenge to evaluate both: their environments and the global situation, as well as their own ability to cope in changing circumstances. Many scholars argue that self-assessment and reflection is more important now than ever before because of individualization and personal challenges to make decisions in an unpredictable world (Abbott 2000; Giddens 1991; Beck 2001). Individuals have the challenge to try to protect themselves from an increasing “matrix of risks” such as loneliness, personal relationships, crime, health problems, terrorism, and ecological disaster, as well as physical imperfections and personality defects (see Threagold & Nilan 2009, 49-50).

Under the conditions of globalised uncertainty, young people may feel themselves pressured, and try to avoid long-term life projects because of contradictory forces of responsibility and autonomy while not knowing the consequences of their decisions (Cebulla 2009, 40). For example, commitment in a close relationship to another person may

not last forever, and you never know when you are going to be replaced by someone else (Giddens, 1990, 142-144; Lupton, 1999, 80).

Discourses on risk offer one frame of reference for the insecurity among young people. It gives a context in which to understand the challenges that young people face in late modern society and their task of making sense of the world. Risk society is not a static description of the state of the world. Instead, it describes the dynamics where people have to be reflexive in coping with uncertainty (Threadgold & Nilan 2009, 50). Abbott (2000, 6) asked the following questions: Are we providing young people with sufficient opportunities which enable young people to build up their psychological success and personal inner security? Are there enough collective "safe heavens", private spaces in time or in states of mind, which help to reflect and to find a foothold in our dynamic world?

The call for security in an insecure world is quite a difficult task, and in the ultimate sense, absolute security is an illusion. Security, which is one of the most important values in the Western world, has become a paradox. The more security is guaranteed, the less insecurity is tolerated (Evers and Nowotny, 1987, 61; Vornanen et al., 2009, 403; Mau et al., 2011, 178-179). More and more information about risks in different spheres of life is available and young people receive this information on the internet and through an ever-expanding variety of different channels.

The theories of risk society cannot explain, exhaustively, how young people experience close and distal risks. Kaufmann (1970) wrote about security related to orientation and security related to systems. According to Kaufman, security related to orientation to the world means how conscious people perceive threats and demands from the outside world. If people's experiences indicate that they cannot influence these issues, they feel insecurity; theories of anomie and social change relate closely to this interpretation of security related to orientation. Security related to systems includes technical security and political security, which implicates systems of governing the risks and threats in society.

4. The personal and social context of security and insecurity

In the literature on risks, there is a sense of breaking traditions in young people's lives (Giddens, 1991; Beck, 1996; Beck, 2001; Furlong & Cartmel, 1997) but there are still some persisting issues that have not changed and have no substitute in the development of security. Personal relationships, especially family and friends are difficult to challenge in the creation of security (Abbott, 2000, 5; Vornanen, 2000). Close relationships are the basic pillars of security in childhood. These relationships are the ones that offer young people some kind of "safe heaven" and private "space" in time (Abbott-Chapman, 2000, 4), where they may be free of stress and pressure to succeed.

One of the paradoxes in security is that the more secure childhood is, the more insecurity is tolerated later in life. This means that a person who has had a secure base (Bowlby, 1988) has the trust in others, the self-confidence, and the coping skills needed to handle threats, troubles, and risks in life.

The other interesting paradox lies in the implicit beliefs that young people are either risks or troublemakers, or conversely, at risk of something and in need of protection from evils.

Young people or children are often seen as a group of people that should be better protected, policed from the evils of the world, or better controlled, as Roche (1999, 477) has critically described. This perspective may lead to situations where young people present as passive objects more than active citizens who participate, observe, and try to influence society. This theoretical division may exist, for example, in child protection where a child can be the victim of family violence or the perpetrator of violence in the home or in a gang. The more insecurity a person has experienced, the more he or she may cause insecurity for others because of trauma and anxiety, fears and trust difficulties. Moreover, the more security the person has gained, the more she or he can offer to other people. In the area of cultural geography, interesting research investigated young people's perceptions of others as insiders or outsiders. This research highlighted how individuals and social groups tend to territorialize spaces and people by including some and excluding others (Green et al., 2000, 117-118). These processes are evident in young people's lives in schools and in other areas of life and may be related to bullying or processes of exclusion (Törrönen & Vornanen 2002), which, in turn, may cause insecurity.

The development of security in childhood belongs to the area of developmental psychology. Discourses on risk also analyse the personal and social contexts of security. It is interesting that approaches to risks combine psychological theories with sociological ones in order to understand the person in a changing society. Anthony Giddens (1991, 39-40), for example, wrote about ontological security, which helps a person to cope in a complicated world. He used the concept of trust and argued that trust was challenged many ways in post-modern society.

One important concept related to risks, then, is trust, which develops in close relationships, but ultimately influences how a person orients to the world and to distant issues. Jones (2004, 225) wrote about "relations of trust" in her study on how young people place trust in experts in risk issues. Threadgold and Nilan (2009, 54) argued that successful or unsuccessful negotiation of risk through the generative disposition of reflexivity was reliant on the socioeconomic or class position of young people. They claimed that young people had to have access to socio-economic resources and opportunities in order to be successful in finding and fulfilling the trajectory of self. For those who had a more materially and ontologically stable habitus, the process of reflexivity could be normal and easy, even routine.

Despite of the risky trajectories to the future, it seems that young people need to have a stable and secure context (family and communities) to develop their identities in a changing world. This means challenges for educational systems to support creative learning processes where young people can participate in holistic processes and have a degree of agency and trust, providing resources to deal with uncertainties they may face in the future (Miles, 2007, 281). It is not just a challenge for learning environments but for environments of cultural citizenship where young people can develop citizenship that focuses on identity, belonging, participation, and mutual responsibility (Hart 2009).

Threadgold and Nilan (2009, 51) emphasized how the new, intensified risks constructed reflexivity as a form of cultural capital. They argued the importance of focusing on socioeconomic status, which shaped young people's perceptions of life's chances and opportunities as opposed to a lack of real choices. Therefore, we can ask, are some groups of

young people in more insecure positions in society regarding their experiences in community and society and their life trajectories. Are young people unequal in terms of security and insecurity? Can there be deficiencies and experiences that either block or enable the possibilities to feel security and freedom of choice? There are challenges for empirical research to study different groups of young people in different contexts; one such group, for example, might be the clients in child protection.

The messages from youth research suggest that close personal relationships in a family and socio-economic resources and capital provide a security base. These issues may be seen as profound prerequisites, which appear to equip young people for the future but do not guarantee total protection from personal and societal risks. They do appear to improve the ability to cope with failures, to increase courage, and to seek solutions and help if needed.

5. Dimensions of the concepts of security and insecurity

Security and insecurity are broad concepts that include a variety of contexts (from close relationships to global issues). Previous studies have showed that insecurity may be either context dependent or universal (Taimalu et al., 2006, 72), local-everyday or global (Pain et al., 2010), or a somehow polarized phenomenon where some perceive either close issues or global and distant issues positively while others view them as negatives. In studies of young people's future expectations, results show that personal future expectations may be mainly positive while expectations regarding the future of the world may be mainly negative. Brunstad's (1998) study described this polarization using the terms 'near optimism' and 'far pessimism'.

The relationship between context-dependent and universal issues is interesting and methodologically challenging. There are many hypotheses about the relationships between the insecurity experienced by close and context-related issues and more distant, society-level or global level issues. DeMuth (1994) studied how people are able to minimize distant threats and concentrate on everyday issues. There might be many reasons for this but one possible reason is that if young people do not believe there is any chance to influence global issues, they just ignore them and deny the value of the threats. If everyday troubles and worries are extremely overwhelming and life is constantly pressing, another possible explanation may be that young people have no interest in global or societal issues under those conditions (Solantaus 1987; 1990).

We can also hypothesize that young people may feel their personal lives are secure and they may not see any insecurity in distant, societal, or global issues. This situation seems ideal when we think about it in terms of fears. There can also be situations where personal lives have and are felt to be secure, but young people express insecurity in societal or global issues. This situation is similar to the concept of orientation-security (Kaufmann 1970), where young people are conscious of societal and world situations. This hypothesis is opposite to the situation where young people are so deeply involved with their own lives that they ignore societal and global threats. The previous situation could characterize young people's orientation into societal and global issues as citizens who are worried about the risks. If they have enough personal security, they have resources to orient towards society, and as citizens, to be politically conscious of what is happening in the world.

6. Empirical research on security and insecurity: two examples of data and methods

6.1 The qualitative inquiry of insecurity

The empirical results from the qualitative inquiry provide an analysis of how young people define insecurity. The results were previously reported internationally in an article in the journal *Young* (see Vornanen et al. 2009). This article uses the results as an example of research on the insecurity dimensions of young people's definitions.

The data were collected as part of a project entitled *Insecurity, Its Causes, and Methods of Coping*. The Department of Social Sciences, University of Kuopio conducted the research and the Academy of Finland supported the project (Niemelä et al., 1997; Vornanen, 2000). The aim of the project was to study insecurity in different age groups and in a wide variety of life spheres. Respondents selection was by random sample in five regions in Finland (Kuopio, Vaasa, Helsinki, Lahti, and Kemi). The data were collected from 1991 through 1995 (inclusive). The original sample consisted of 1010 young people, and the age range was 13 to 17 years. The response rate was high, 91% of the original sample. In total, 922 young people participated in the study, 431 girls (47%) and 491 boys (53%). This matched the distribution of sex in the same age population in Finland. The data were collected from schools. Respondents completed a questionnaire in classroom settings. The questionnaire comprised structured and open-ended questions concerning security and insecurity. (Vornanen et al. 2009.)

The question, "*In your own opinion, what is insecurity?*", (Write a few words) elicited young people's definitions of insecurity. The Finnish term for insecurity (*turvattomuus*) carries the meaning 'lack of safety' or 'lack of security', inferring that something is missing. The connotations of the word are also close to the concept of fear. The Finnish term for insecurity is common in everyday language; so, we can safely assume that young people are familiar with this word. (Vornanen et al. 2009.)

The purpose of an open-ended question was to collect data on the meanings of the concept of insecurity among young people. The structured questions in the questionnaire focused on gathering information on the degree of insecurity in different spheres of life, whereas the open-ended question aimed at eliciting data on the personal meanings of the concept. The different sections of the questionnaire (spheres of life) were human relations, school, health, society, environment, and global issues. This article will report only on the results elicited through the open-ended question. The questionnaire was rather extensive, comprised of 108 questions. For this reason, this analysis is limited to only the qualitative part of the study. (Vornanen et al. 2009.)

Nine hundred and twenty-two (922) respondents filled in the questionnaire, and 74% of this group answered the open-ended question concerning the definition of insecurity (683 young people, 339 girls, and 344 boys) (Vornanen, 2000; Vornanen et al. 2009). Almost equal numbers of girls and boys answered the open-ended question, even though the number of boys was greater among all the respondents.

Given that the questionnaire was so extensive, it is not surprising that not all of the respondents answered the open-ended question. The respondents might have been too tired or unwilling to write answers in their own words. Perhaps some of the young people felt

that the question was difficult. We can only presume that the more linguistically oriented young people were more likely to answer this question. However, the qualitative data from almost 700 young people were sufficient and represented randomly selected participants and their views for this age group.

The method used in this qualitative part of the study was content analysis (Kvale, 1996). To reach young people's own constructions of security, this databased method of analysis was relevant. At the beginning of the analysis, the data of open questions were reviewed several times in order to get an overview of the content. While reading, the researcher made preliminary notes. In the next phase of the analysis, data were classified quantitatively by the young people's definitions of insecurity divided into groups or categories by their main themes (see Table 1).

Insecurity	Girls %	Boys %	All %
Fear and anxiety	18.0	20.0	19
Loneliness	23.6	10.2	16.8
Lack of family or difficulties in family relations	10.0	9.6	9.8
Violence, fear of crime	5.3	10.5	7.9
Deficiencies in well-being and financial situation	6.2	5.5	5.9
Feelings of having no place in the world or personal space, feeling of not belonging anywhere	6.2	4.9	5.5
War	3.8	6.1	5
Others (together, smaller % than earlier mentioned)	21.4	38.7	29
Total (n) %	100 (344)	100 (339)	100 (683)

Table 1. 'Insecurity' defined by 13–17-year-old Finns (percentage, the most often mentioned). Source: Vornanen (2000, 259) and Vornanen et al. (2009, 407)

The differences between girls and boys have not been tested using statistical procedures, and we cannot comment on significant differences in the youth population. The results show only slight differences between girls and boys in percentages - how many defined insecurity as fear and anxiety, for example, or the most general theme among boys or girls. Every fifth boy defined insecurity as fear and anxiety while the biggest insecurity category among girls was loneliness or lack of support.

The categories of insecurity found in the data were analyzed and divided according to three headings or circles:

- the inner circle, i.e. insecurity related to personal emotions and experiences: fear and anxiety, low self-esteem, instability, lack of safety
- the social circle, i.e. insecurity related to social interaction: loneliness, lack of support, lack of trust, lack of family relations, lack of privacy, feeling of no place in the world or personal space, feeling of not belonging anywhere, discrimination, bullying
- the outer circle, i.e. insecurity related to external realities: threat, uncertainty regarding the future, deficiencies in well-being and financial situation, violence, fear of crime, war.

Girls and boys gave slightly different meanings to insecurity (Vornanen et al. 2009). Girls seemed to define insecurity more in social terms while boys defined it in outer terms such as threats to their integrity. The feminine interpretation connected to socio-economic features such as loneliness, low self-esteem, lack of support and trust and bad family relationships, and to lack of health. The masculine interpretation showed that boys, more often than girls, combined insecurity with fear, anxiety, lack of safety, violence, fear of crime, discrimination, and bullying, or with lack of privacy. For both sexes, personal issues and social relationships constituted the main themes. Distant issues stayed more behind the scenes.

6.2 The quantitative inquiry of insecurity

The other empirical example of research on young people's insecurity came from quantitative research on insecurity, studied as part of a national survey used as a youth barometer (2010, N 1900, see Myllyniemi 2010). The nationally representative sample (made in Population Register Centre, Finland) consisted of young people, aged between 15 and 29 years. According to some definitions, the term 'young people' includes all under the age of 29 (Youth Act 2006/72; Youth work and Youth Policy 2011). The study was carried out by telephone interviews (Myllyniemi 2010b, 10).

Here we report young people's answers regarding how much they experience insecurity related to each of the issues mentioned in the questionnaire, based on the article published in Youth Barometer, 2010 (Vornanen & Miettinen, 2010). We then analyze the results in relation to the empirical findings presented earlier, in order to reach a holistic view of insecurity, as experienced by young people.

In Youth Barometer, the questionnaire consisted of different dimensions of insecurity related to personal life and to societal and global issues. Two questions contained 27 dimensions. Subjects rated each dimension on a five-point Likert scale from 1 "very little or not at all" to 5 "very much"; an option of "cannot answer" was included separate from the scale.

Statistics included factor analysis for the group of young people who did not answer for any single insecurity item that they did not know. Altogether, 1537 (listwise) youngsters were included in the analysis; 696 of the respondents were women and 841 were men, with 831 of them being students. The factor analysis used the maximum likelihood extraction method and promax rotation, which produces factors that can correlate with each other. Factor analysis was based on correlation matrixes. The result of this analysis was the solution of six

factors that exceeded the eigenvalue 1, which, cumulatively, explained 47,4% (coefficient of determination) of variation (see Table 2).

Factor	F1	F2	F3	F4	F5	F6	Communality
Victimization							
Victimization of sexual violence	,903	-,145	-,012	,003	-,004	-,065	,65
Victimization of physical violence	,862	-,105	,075	-,121	,040	-,063	,61
Victimization of mental violence	,834	-,003	,036	-,097	,049	-,092	,63
Own risk to exclude	,677	,111	-,001	-,107	-,097	,089	,49
Loneliness	,642	,057	,021	,021	-,103	,040	,44
Security of neighbourhood	,547	,024	-,015	,040	-,040	,138	,39
Own health	,360	,209	-,071	-,036	-,018	,246	,37
Human unethical behaviour							
Values and attitudes in society	-,076	,924	,010	-,023	-,195	-,048	,53
Global economy	-,061	,770	,053	-,043	,048	-,022	,58
World politics	,050	,624	,066	,039	-,123	,080	,46
Climate change because human activities	-,075	,595	,120	-,070	,065	,013	,40
International terrorism	,102	,538	-,051	,030	,151	-,022	,50
Epidemias and pandemias	,149	,520	-,073	-,036	,152	-,044	,43
Sufficiency of Energy	-,058	,484	-,128	-,056	,397	-,026	,47
Future of welfare services	-,007	,442	,109	,126	,151	,007	,53
Crimes against information network	,044	,373	,089	,187	,165	-,043	,52
Polarization and declining joint responsibility							
Inequality of Finnish people	,032	-,042	,795	-,028	,028	,002	,60
Weakening communities	-,010	-,042	,766	,031	,066	-,023	,61
Aging population	,007	,121	,671	-,057	-,033	,029	,50
Racist violence	,104	-,014	,553	,117	,015	,006	,46
Exclusion of young people	-,008	,174	,499	,041	-,072	,039	,39

Factor	F1	F2	F3	F4	F5	F6	Communality
International relations, religion and politics							
Russia	-,175	-,045	,030	,752	-,064	,008	,44
Islam	-,161	-,105	,060	,737	-,074	,030	,41
Expanding European Union	,063	,111	,005	,618	-,086	,036	,49
Globalizing economy	,104	,105	-,054	,577	,121	-,031	,56
Growth of population in globe	,021	,217	-,039	,526	,064	,027	54
Conflicts between religions	,007	-,087	,392	,458	-,022	-,022	,49
Increasing amount of immigrants	,030	,330	,035	,373	-,063	-,036	,40
Weapons of mass destruction (e.g. nuclear weapons)	,147	,032	,029	,359	,327	-,051	,51
Environmental catastrophes							
Nature catastrophes	-,107	-,090	,005	-,068	,802	,114	,50
Pollution of environment	-,108	,081	,113	-,097	,678	,046	,50
Military attack to Finland	,198	-,012	-,057	,016	,541	-,038	,39
Risks in personal life							
Own livelihood	-,121	-,002	,024	-,048	,086	,737	,51
Own security	,135	,032	,006	-,105	,012	,598	,43
Employment opportunities	-,073	-,045	,055	-,005	,080	,543	,30
Security of family members	,106	-,078	-,070	,205	-,013	,491	,32
Studies	,147	-,100	,000	,183	-,027	,313	,18
Eigen value	11,1	2,7	1,3	1,2	0,7	0,5	
The cumulative coefficient of determination 47,4 (%)							

Table 2. Dimensions of insecurity (factor analysis, maximum likelihood, promax, listwise).
Source: Vornanen & Miettinen (2010, 208)

The factors were labelled by using all the variables that were loaded into factors, which was in line with the original idea of factor analysis; the names of the new factors were not those of the original variables (see Eskola 1995, 253). The first factor, related to personal insecurity and one's intimate social sphere, was *Victimization*. The second factor depicted global risks and insecurity related to them; it was *Human unethical behaviour*, because the point variable

reflected the values and attitudes in society. The third factor clearly indicated the dilemmas in Finnish society and was *Polarization and declining joint responsibility*. Factor number four related to issues of international policy and religions and was *International relations, religion, and politics*. Three items loaded to a fifth factor that was *Environmental catastrophes*. Since the sixth factor covered items related to personal life and insecurity issues, it was *Risks in personal life*. (Vornanen & Miettinen 2010.)

The factors represented the dimensions of insecurity in youth aged 15–29 years. We then studied the relations among different dimensions of youth's insecurity and the correlations between different factors. We noticed that factors seemed to be in relation to each other and there were quite strong connections between some factors (see Table 3).

Factors as insecurity dimensions	Victimization	Human unethical behaviour	Polarization and declining joint responsibility	International relations, religion and politics	Environmental catastrophes	Risks in personal life
Victimization	1,000					
Human unethical behaviour	,573	1,000				
Polarization and declining joint responsibility	,306	,579	1,000			
International relations, religion and politics	,411	,722	,674	1,000		
Environmental catastrophes	,479	,733	,430	,562	1,000	
Risks in personal life	,417	,444	,350	,332	,348	1,000

Table 3. The correlations between insecurity dimensions. Source: Vornanen & Miettinen (2010, 209)

The correlations between factors showed that there was a relationship between personal and more distant dimensions of insecurity (see Table 3). The strongest correlations (by the criteria $>0,6$) were detected between environmental catastrophes and human unethical behaviour (.733) and between international relations, religion and politics and human unethical behaviour (.722). International relations, religion and politics and polarization and declining joint responsibility also had strong correlation (.674). The loaded variables for those factors were quite similar, which might explain the strong correlation.

There were also strong correlations ($>0,5$) between human unethical behaviour and victimization (.573), as well as between polarization and declining joint responsibility and human unethical behaviour (.579).

7. Conclusions, implications, and discussion

Qualitative results show a wide array of dimensions of insecurity in young people's own definitions. Young people are conscious of the personal, social, societal, and global threats.

The world and environment do not necessarily become more complicated for young people, but as the results show, life's complexities and challenges gradually unveil and become clearer to them (Lahikainen et al., 1995, 42). The open-ended questions gave young people more freedom to define and describe the content of the insecurity concept. The following table compares the two studies and analyzes the content of the concept:

Qualitative inquiry: dimensions	Content of the concept	Quantitative inquiry: dimensions (factors)
The inner circle, i.e. insecurity related to personal emotions and experiences: fear and anxiety, low self-esteem, instability, lack of safety	Personal risks Inner feelings, fear and anxiety Threat to identity	The threats of personal life The risks of victimisation
The social circle, i.e. insecurity related to social interaction: loneliness, lack of support, lack of trust, lack of family relations, lack of privacy, feeling of no place in the world or personal space, feeling of not belonging anywhere, discrimination, bullying	Social risks Loneliness Distrust, lack of trust Discrimination Difficulties in participation	Unethical behaviour of human beings Polarisation of the population and the weakening of solidarity
The outer circle, i.e. insecurity related to external realities: threat, uncertainty regarding the future, deficiencies in well-being and financial situation, violence, fear of crime, war	Societal and global risks Economic, political and cultural risks Violence Environmental risks	International relationships, religion and politics Natural catastrophes

Table 4. Comparison of insecurity dimensions based on qualitative and quantitative inquiry

This table shows the three categories of insecurity described by young people and analysed from the literature. The content of the personal level concept comes from insecurity as an emotional experience of fear and anxiety and threats to identity. Insecurity in social issues relates to personal relationships and risks in social life such as exclusion from participation. This level of security also has an emotional content of loneliness, distrust, or being rejected or discriminated by others. Young people may also be worried about the behaviour of others (unethical behaviour) or loosening social bonds in society, which may manifest in decreasing solidarity and polarization in a society. At the societal and global level, the content of security related to violence, environmental risks, and the unpredictability of economic and political decisions. Young people seem to be very aware of global risks.

The results of the qualitative study confirm that young people describe insecurity in a three-dimensional way; they argue that even young people do not feel safe from risks (Vornanen et al., 2009). They are mature enough to analyse three-dimensional risks at the same time. They connect insecurity first to their inner feelings and emotions as an inner experience with basic security and balance, second, to their social relationships, and third, to external circumstances, including socio-economic resources, violence, and war. Their social relationships give special significance to parents, to other relatives, and to friends. The external circumstances cover international relationships and global circumstances. At the societal level, insecurity connects with security resources, social support, and a secure environment.

The definitions of security by young people do contain both individualized and collective interpretations of insecurity. The visibility of individual interpretations points to the important meaning of social contacts for young people. This argument connects to the idea of social capital (Bourdieu 1984; Coleman 1991; Putnam 1994, 2000), which supports the well-being of an individual, and usually connects with good working life relations, wealth, and good health. For social capital, it is very important that people follow the norms of their social networks and that they are appreciated as important members of their networks. The networks or groups punish or exclude them if they do not obey the social rules or if they somehow cannot reach the level of their mates or of people close to them. Young people are afraid of exclusion from their social circles. They are not selfish because, if they have energy and time, they care not only about other people close to them but also about global situations. Sometimes the concerns of everyday life are so pressing that a young person might have no interest in global threats (Solantaus, 1987, 1990). However, young people point out the outer threats of insecurity and they are concerned about them.

Here we have to remind the reader that the insecurity studied with quantitative measures has been analyzed by factor analysis, which condenses the meaning of a variety of different factors. The strong correlations between factors allow us to assume that there is a connection between more personal and more distant issues of insecurity.

Insecurity is a concept that includes many dimensions and levels depending on the interpreter of the concept and on a person's own experiences. The various dimensions also change according to time and place. One restriction to these kinds of empirical studies is that, when trying to get a general picture or overview of insecurity, they may lose the context of and the connection to young people's real-life events and real experiences. Therefore, it is important to develop context-related insecurity studies. This question of context is highly important in comparative studies (see for example Taimalu et al. 2007). We need further studies to develop and to validate more measures for insecurity at each level: personal, social, societal, and global.

It seems that insecurity is somehow a very holistic, even "amoeba-like" phenomenon, which may have different content at different times and under different circumstances. We can compare this phenomenon, from this perspective, with happiness, which may also be experienced joyously or be severely curtailed, depending as well on different times and circumstances.

According to many approaches to insecurity (see Kaufmann 1970 and other previous studies on the concept), it is not just a feeling. Our empirical results provide evidence for

developing the concept of insecurity as a multi-level experience, which has manifestations at a personal level as well as in young people's orientation to more distant issues.

8. References

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War, Genocide and Atrocity in Yugoslavia: The ICTY and the Growth of International Law

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1. Introduction

This chapter will examine the conflagration in Yugoslavia during the 1990s and the role of international law in the recovery of community there in the past decade. Since remembrance of the past (Durkheim, 2008; 1992) reconfigures and heightens the meaning of what happens in the present, different traditions and histories in each of the six republics in the Yugoslav Federation produced a variety of unattended ruptures, threats and problems from WWII to the present. We gain new insight into the challenges of sustaining a balanced social integration (Durkheim 1893/1997) and vital ethnic diversity as modernity goes forward in older communities by examining what happened in Yugoslavia during the 1990s. The role of International Law (Cassese, 1986) is highlighted in terms of being a force for social order in the aftermath of great social upheaval. The importance of justice processes associated with the International Criminal Tribunal in Yugoslavia (ICTY) has commanding significance in providing a foundation to support economic processes for rebuilding community.

2. International law and world ordering

Since Nuremberg and WWII, never has there been such an uptake of ideas that were part of the emergence of international law and its world ordering capacity (Slaughter, 2004:15-31; 64-103; 216-260) as occurred in Yugoslavia in the 1990s. This applies as surely to communities recovering from atrocity as those trying to improve trade in the aftermath. Samantha Power (2002:171-327) describes in detail the grotesqueries of several of the many recent genocides in which humanitarian involvement was implicated. In the case of the Yugoslav wars, the need for intervention came at a point historically when the Western democracies were being dragged into one war after another with the consequence that public apathy towards military action by western powers became politically untenable (Bass, 2000:206-215). Public moral outrage grew, however, as reports of atrocities intensified. It was partially mollified by the intervention of a wider network of nations (Valentino, 2004:1-8). The United Nations also began to organize a commission to inquire into what was occurring and established guidelines for involvement.

Winston Churchill in a speech on August 24, 1941 (Brietman, 1998:91-93) described the Nazi offensive in the Balkans and the east as "merciless butchery." Allied strategies against the

Nazi monolith in Europe finally halted human rights abuse and aggressive warfare by 1945. At the time Serbian Partisans were recognized as part of the Allied effort. In the 1990s, there was a different face for Serbia as the United States was asked to stop atrocities and ideological killing by Serbia against members of the constituent republics opposed to the federation. For several of these states, like Croatia, which had aligned with Nazi interests in WWII, there was a policy of persecution against Serbs. The Nazi-led Ustasha in Croatia dictated that a third of the Serbian minority were to be killed, another third expelled, and the remainder were to be converted to Catholicism and assimilated as Croats. In allegiance with the Gestapo, torture and massacre of the Serbs went forward. Jews in the area were the first to be sacrificed to Nazi reprisal killings (Browning, 2004:334-346) as the Nazi eastern front was established and Holocaust went into the Final Solution. However, Serb Partisans had been an estimable fighting force for decades before that and, despite brutal repression had won through in the region by the end of 1945. In the postwar period of the 1950s and 1960s, sovietization silenced (Denich, 1994) the voice of memory in favor of a “brotherhood and unity” theme propagated under Marshall (Josep Broz) Tito. When Tito died in the 1980s, old animosities flared as decentralization took over the Yugoslavian republics. Nationalism grew during the 1980s and undergirded support for the leadership of the noncommunist, Slobodan Milosevic.

As the Yugoslavian wars ignored the Geneva conventions, atrocity and genocide fulminated in the republics. An already growing role for International Law and The Hague in a world divided (Cassese, 1986) took further expansion. Currently international law supports redevelopment of social, political and economic institutions (Hagan and Ivkovic, 2006) where democratization is associated with a justice cascade (Sikking & Booth Walling, 2007) that reconciles peoples who might otherwise enter a destructive cycle of endless violence.

3. Historical overview

Yugoslavia had ethnic diversity by the 1920s but there was little structural integration between ethnicities throughout the twentieth century. Modernization separated the fluid present from the static and iconic past, which for Yugoslavia had roots in archaeological times. The region has been a crossroads from antiquity to the present, with people living there extending from the Illyrians and Thracians of the third century BC on to the Roman Empire of the third century CE. The ever growing mix of peoples there went on to include the Goths, Huns, Avars, Slavs and by the seventh century CE, the Serbs and Croats. In 1463 the Ottoman Turks invaded the areas of Serbia and Montenegro. By 1919 the Balkan region was referred to as the Kingdom of Serbs, Croats, and Slovenes, a time when they were still dealing with aggressive Turkish territoriality from the 1800s. Serbs, followed by the Croats, were then the largest ethnic groups in the Kingdom. Post WWI, Croatian nationalism was also on the rise and King Alexander in 1929 attempted to quiet Serbian and Croatian tensions with a change of name to Yugoslavia. In 1946, after WWII, Yugoslavia became a federation of six republics. Croatia and Slovenia were the most economically well developed republics in the region. Serbs, however, dominated the officer corps of the Yugoslav People’s Army (JNA), and under Tito, Serb influence in the military grew stronger.

With the collapse of communist regimes (Woodward 1995) throughout eastern Europe and perestroika in the Soviet Union, the parallel structure of social integration in the federation followed an ethno-religious principle. Political unrest flowed along ethnic lines. The federation that had galvanized during the Tito years, held together by a suprasocialist patriotism of the communist party elites, began to disintegrate in the 1980s. It was replaced by a growing xenophobia that turned to the oppositions holding during WWII. Serbs and Croats were once again enemies. Narratives of the Serbian intelligentsia (Guzina, 2003: 91-111) spread to military and economic elites. The media popularized it and gradually a realization grew that only by building a Greater Serbia could the haphazard regional integration be replaced by a fast moving democracy. Nationalist rhetoric was taken over by politicians until the interpretation of a broader issue appeared to loom behind specific controversies occupying constitutional decentralization. There was concern that the Republic of Serbia would align with Serbs scattered throughout the other republics and a greater Serbia would form (Cohen and Soso, 2007: 105) to the detriment of current interests within already economically flourishing republics.

There had not been a strong sense of Yugoslav identity as a communist satellite country, yet being one meant submerging ethnic identity into a nominal unity. Atanasova (2009:59) looking at Macedonia during the same period found many similarities. Macedonia is also a Central European nation with many of the same problems and attributes as republics in Yugoslavia. Macedonia is a landlocked country wedged between Bulgaria, Albania and Greece. As in Yugoslavia the debates directing public opinion leading to regime change was elitist in nature and occurred exclusively at the level of political and military elites. Leadership could not embrace their people or the rationality of a culture of participation rather than one of dominance. The people were the "outsiders" ready to be objectified in various kinds of social policy. Nationalism in this way took on many of the dynamics of Nazi politics in Germany, 1928-1945, and increasingly came to be the omnibus solution for all problems as social movements threatened unrest.

In Yugoslavia from the 1950s onwards the interests of the more developed republics were seen as more than ever compromised rather than benefitted by the federation. Smaller, ethnically homogeneous territories of Kosovo and its neighbor Vojvodina, both in Serbia, increasingly wanted independence from the federation. Kosovo in the 1990s accounted for 12 percent of Serbia. It had a population of two million of which about 90 percent were Albanian Muslims who saw their interests as aligned with Albania more than Serbia. Unemployment was high there (57 percent) in 1989 and throughout the 1990s. The people of Vojvodina, who were mainly Christian, had other regional allegiances. Yet in terms of collective memory, the Serbs saw Kosovo as the heart of the first Serbian state in the 1100s. The Serbian Orthodox Church's patriarchate was located there in 1346. In the 1980s, the Serbs insisted Kosovar be called Kosovo-Metohija since it represented monastic lands (Rogel, 2003:169). There were many battles fought in that area over time but none more meaningful than the final conquest of Serbian lands in 1389 with the battle of Kosovo Polje. Kosovo had profound symbolic meaning, then, for the Serbs and oral legends associated with the region enshrined the Serbs as a chosen people. The 1974 Constitution made Kosovo one of eight official units, with Kosovo and Vojvodina given parity with the republics. This did not sit well with Serbs who felt once again cheated of their heritage (Rogel, 2003:171)

As Serbian nationalism grew after Tito's death in the 1980s, Kosovo, had gained with its own constitution, a new supreme court and its own university in Pristina, was an irritant to the Serbs. It was, however, the non-communists who were the first to voice dissent. Though Slobodan Milosevic was communist, he became popular with Serbs in Kosovar who wanted nationalism. Television and the Orthodox Church boosted his popularity in Serbia and, by 1988, Serbian nationalism looked to create a greater Serbia that would include Serbian peoples scattered throughout the whole of Yugoslavia. Serb intelligentsia wanted a new Yugoslavia with a new constitution based on the federalism of the 1950s and tighter political measures in Kosovo. They also wanted a greater say in the affairs of Serbian people in Croatia and Bosnia, among others. It was a sufficiently loose understanding to attract even opposite political In the debates of intellectuals and a popularizing of them by the media, however, ethnic cleansing entered the exchange of rhetoric (Guvina, 2003:104-108).

In order to consolidate power, Milosevic purged the League of Communists (LCY), the national communist party, in Kosovo, Vojvodina and the republic of Montenegro. Kosovars protested the purge. They rejected the Serbian brand of nationalism being propagated at their expense (Rogel, 2003: 172-173). Albanian students in Pristina, engaged in unrest with mass rallies and rhetoric focused on the strength of ethnicity. They favored an independent Kosovo Republic. Kosovo had various kinds of mining operations of great importance to Yugoslavia's economy and felt they could leverage this into political clout against the militarily superior Serbs. However, no matter how important and reasonable the protest mounted by Kosovo, Belgrade imposed severe police and military force to repress it. When Belgrade cut them off, the Kosovars did not relent but heroically set up their own trade unions, and organized their own schools and hospitals. Nevertheless Kosovo lost its autonomy by March 1989, and Kosovars were left to lead a virtual life in a virtual state (Ignatieff, 2000).

4. The Wars of the 1990s in Yugoslavia

Within opposing tides of sentiment and interests in the 1980s, political power valances shifted favoring Slobodan Milosevic as a popular politician and opinion leader. Using internal military intelligence videotapes and other primary sources unearthed after the 1990s wars, Silber and Little (1997) pointed to the significance of the role taken by Slobodan Milosevic of Serbia in directing controversy towards the break-up of Yugoslavia and its reconstitution in 1992.

The precipitating event for the start of the wars was the 14th Extraordinary Congress of the League of Communists of Yugoslavia in January 1990. Divisiveness had made unity unpalatable. The Yugoslav wars were fought throughout the former Yugoslavia between 1991 and 1995. Complex, they were the deadliest wars fought in Europe since WWII. They lasted from 1991-1995 and for seventy-eight days in the spring of 1999.

There were three main wars in the 1990s: the Ten Day War (1991), the Croatian War of Independence (1991-1995), and the Bosnian War (1992-1995). A smaller war in 1999 occurred in Kosovo.

The Ten Day War: Slovenia as an economically strong republic within Yugoslavia seceded on June 25, 1991 together with Croatia. The Ten-Day War started the next day with the

Yugoslav People's Army (JNA) moving towards the Croatian border with Italy. Slovenia put up barricades and launched demonstrations, then went on to secure its border posts and the international airport at Brnik. After a three-month moratorium on secession during the summer of 1991, by October 26th the JNA withdrew from Slovenia. Losses to Slovenia were light. It maintained its independence and prosperity throughout the 1991-1998 period.

The Croatian War of Independence: This war is known to Croats as The Homeland War. It lasted from 1991 to 1995 and though it ended in Croatian victory, there were massive losses in terms of casualties, bloodshed and the economy. Aggressive warfare led to atrocity and claims of genocide against Serbia which were later sustained by the ICTY. Displacement of Croatia's highly urbanized population was huge. The Battle of Vukovar is noteworthy. When it fell to Serbian led forces on November 18, 1991, a massacre of soldiers and civilians followed.

The Bosnian War: In the break-up of Yugoslavia, this war began with the multi-ethnic Republic of Bosnia and Herzegovina passing a referendum in support of independence on February 19, 1992, that was opposed by Belgrade and Bosnian Serbs. War broke out on June 19, 1992, with Serbian forces opposing Zagreb-backed forces engaged in bitter fighting that led, among other things, to the siege of both Sarajevo and Srebrenica. This was the bloodiest of the Yugoslav wars. Bosnia's Serb faction led by ultra-nationalist, Radovan Karadzic, psychiatrist and amateur poet turned politician, as President of Republika Srpska, led Serbian allied forces in aggressive warfare that produced untold brutality on Bosnians. By April 1995, 90 percent of all atrocities in the Yugoslavian wars were identified as Serb caused and inside Bosnia. In 1994 the United States brokered a peace between Croatian forces and the Bosnian Army of the Republic of Bosnia and Herzegovina. Under Operation Maestral the Bosnian Serbs were pushed back by the combined forces of the Croatian Army and the Bosnian and Croat forces in Bosnia and Herzegovina. Operation Maestral was backed by Nato Air Strikes against the Bosnian Serbs. After Operation Flash and Storm, the fighting ended in Croatia in mid-1995. The Dayton Agreement on December 14, 1995, however, permitted Bosnian-Serbs to have their demands met to establish Republika Srpska, a decision which today is responsible for continued conflict and destabilization in the region.

The Kosovo War: This war took place in seventy-eight days between January and June of 1999. Disturbances in Kosovo at that time set Albanians and Serbs on a collision course that polarized Yugoslavia in the early 1990s (Rogel, 2003:167). The Dayton Accords signed in Paris in 1995 had not ended Kosovo's concerns. Kosovo took a militant policy toward Serbs, and Serbia escalated oppression of local populations. By 1998, in connection with the larger violence in Yugoslavia, the ICTY had to make arrests throughout Serbia and in Kosovo. On January 8, 1999, a reported massacre of forty-five civilians at the village of Racak in Kosovo (Strauss, 1999; Walker, 1999) opened up a series of inquiries by the ICTY about Serbia's role in events there. It convinced NATO and the Contact Group set up by the Dayton Accord to hold jurisdiction in the former Yugoslavia, and that intervention against Serbia was imperative. Great Britain, Germany and the United States began preparing an occupying force (Rogel, 2003: 176). On February 6 to 26, 1999, the Rambouillet Conference in Paris brought Serbia, Albania, America, Britain and Russia to the table. By February 23 1999, meetings had sustained agreement that there should be wide-ranging autonomy for Kosovo within the framework of the Serbian state. This agreement was to be secured by

the stationing of a 28,000 member peace force under the umbrella of NATO. Serbia rejected the presence of NATO troops. In March, NATO set up a military presence by attempting to work with the Kosovo Liberation Army (KLA) to secure Kosovo so as to staunch the many ceasefire violations taking place there. In the end, the conference failed in that Russia and Serbia refused to sign the Rambouillet Accord on March 23, 1999. Kosovo signed after consulting with Albanians. The war began on March 24, 1999 and lasted seventy-eight days until June 10, 1999. On June 9, 1999, Yugoslavia signed a Military-Technical Agreement that ended the fighting. The UN Security Council passed its Resolution 1244 which outlined the postwar settlement (Rogel, 2003:180) for the area and the United Nations set up a mission in Kosovo.

5. Atrocity

Atrocities of the most egregious kind took place throughout the wars, and claims of genocide were made. The atrocities associated with ethnic cleansing in Yugoslavia during the 1990s were patterned on those that took place during the Nazi Occupation of the Balkans and Russia from 1941-45 and the Holocaust, 1933-45. As one local war spawned another, policing and administration of law were inadequate to deal with the crimes of a military not acting under the Geneva conventions. From 1993-1995, the United States and other Western powers were called on to create a situation which would limit further infractions of the Geneva Convention and International Law.

Five years after Vukovar had surrendered to the JNA, Clea Koff (2004) was part of a United Nations forensics team sent to Croatia. She described a bleak, mortared landscape where signs of the earlier destruction were everywhere. The Borovo boot factory had been abandoned; every other house had been shelled to the foundation. Mortar shells had indiscriminantly left holes in buildings so that she could see rooms in homes and apartments left open by the blasts. She reflects, "I couldn't see any people around the apartments" and, despite its being winter, there was no electricity. Those living there were not from that place originally, "They were refugees: Serbs, "cleansed" out of northern Bosnia or the Krajina in Croatia, forced to leave behind their dead, forced to live one step from squatting, in the apartments of the Croats who themselves had been cleansed from this town" (Koff, 2004:164).

Killings and human rights violations continued after the signing of the Dayton Accord and, in 1999, war in Kosovo had begun. Throughout the almost ten years of warfare, rape had been used as a method of ethnic cleansing and had happened under official orders to displace a targeted group (de Brouwer, 2005: 9-10). Patterns in the killings had reflected a determined attempt to symbolically and physically destroy the patrilineal basis of a targeted ethnicity. Women were kept in camps until the late stages of pregnancy. At least 35,000 Bosnian and Croatian women were kept in Serbian run "rape camps" (de Brouwer, 2005; Robson, 1993). The NATO-led Kosovo Force (KROR) documented the rapes of Albanian, Roma and Serbian women by Serbs and members of the Kosovo Liberation Army (de Brouwer, 2005). According to the Women's Group, *Tresnjevka*, more than 35,000 women and children were held in Serb-run "rape camps"(de Brouwer, 2005: 9-10; Robson, 1993). In the Srebrenica massacre, July 1995, 20,000 Bosnian women, children and elderly were bussed mainly to rape areas; 8,000 boys and men were systematically murdered and buried in mass graves. The Foca massacres (Bosnia) between 1992 and 1994 involved the killing of around

2,704 people. Barkan (2002) indicates that in Foca upwards of twenty thousand Muslim women were sexually enslaved and tortured (Stiglmayer, 1994) by Bosnia Serbs, Serbs and Montenegrins during the Bosnian war of 1992-1995. Dragoljub Kunarac, Radomir Kovac and Zoran Vukovic were convicted by the ICTY of rape, torture, and enslavement committed during the Foca Massacres.

Hagan and Ivkovic (2006:130-151) report that every area of the former Yugoslavia has people living there who have memories of losses of family and property, and various kinds of psychic and physical wounds that submerged rather than healed. Hagan and Ivkovic conducted research in four cities representing Kosovo, Serbia, Croatia and Pristina. Victimization measures indicated that Sarajevo had the highest victimization (Hagan and Ivkovic, 2006:138-139), followed by Vukovar, Pristina and Belgrade, but no area was without those who were "personally victimized," "witnessed victimization," had "family victimized," or "neighbors victimized." Without telephone or household sources of information, respondents were sampled from the streets, at coffee shops, department stores and other venues in the central business districts of the cities in the study (Sarajevo, Belgrade, Vukovar and Pristina). There was a slight bias in the sample towards "better educated" than the rest of the city population, which meant being better informed and more willing to take part in the study. Pristina, the city most recently in need of defense and least able to organize criminal proceedings, gave the ICTY the most support and Belgrade, the least victimized city, gave the least support (2006:140).

Displaced persons and others choosing to move went to centers representing their own ethnicity. Lukic and Nikitovic (2004:86-110) point out that while international humanitarian organizations moved some refugees from Bosnia and Herzegovina around the world, "the overwhelming majority of refugees from Bosnia and Herzegovina sought refuge in Serbia and Montenegro or resettled inside Bosnia and Herzegovina..." (2004:89). Census data indicate that in 1996, the largest percent distribution of refugees from Bosnia and Herzegovina went to Vojvodina, the least to Kosovo (90 percent Albanian); the largest numbers of Croats also went to Vojvodina and the least to Kosovo. Serbia and Croatia made up 50 percent of the population in the eight republics. Vojvodina was 25 percent Catholic or Protestant, the rest Muslim; Kosovo was 89 percent Muslim majority. Serbia was considered by many to be the most religiously diverse of the republics, with Greek and Rumanian Orthodox and Catholics in the majority, and Muslims, Protestants and Jews the remainder. However, Central Serbia and Belgrade were over 90 percent Orthodox. Parallel ethnic structures still directed social integration. Examining census data, for instance, Lukic and Nikitovic (2004: 89; 85-110) use the 2001 census to describe the flow of refugees from 1996 onwards. The total number of refugees from the federation of Bosnia and Herzegovina in Serbia was higher in 2001 (84.2%) than 1996 (78.7%) (UNHCR, Serbian Commissariat for Refugees, and ECHO, 2002). Of the refugees, 139,076 lived in Belgrade, 95,024 in Central Serbia outside of Belgrade, 442 in Kosovo and Metohija, 217, 438 in Vojvodina (UNHCR, Serbian Commissariat for Refugees and ECHO, 2002).

6. The question of intervention and the ICTY

The Yugoslavian wars of the 1990s afford an example of the kind of situation in which Europe, the United Nations and the United States might hope that low-risk, small-scale

military interventions for humanitarian missions could prevent atrocities where there were human rights abuses. Valentino (2008:727-729) points out that President Clinton, who came into the US Presidency in 1993, avoided putting ground forces in Bosnia in 1995, and Kosovo in 1999, and admitted that there was a lot to learn about this kind of hopeful problem-solving. Public concern in the West was restrained during most of the 1991-1995 period. The West, and especially the United States, had been careful about committing troops to combat (Bert, 1997) without carefully setting rubrics in place beforehand. It was so in WWI and also in WWII (Bass, 2000). Variations on this in Vietnam and Somalia served as painful reminders of instances where the principle had not been followed. Public concern as the bloodletting escalated in Yugoslavia was appeased by United Nations efforts. After the UN Security Council had put in place a commission to investigate the Yugoslavian wars, it finally supported the creation of the International Criminal Court (ICTY) to warn the perpetrators that infractions of Geneva Conventions and human rights law would not go unnoticed or unpunished. This was meant to allay concern and stay the specific involvement of nations ready to go to war over infractions of human rights law. The Yugoslavian Wars, however, challenged this understanding.

The wars in Yugoslavia in the 1990s differed from WWII in many respects (Bass, 2000: 148-152; 206-209). In WWII soldiers were already engaged in battle when evidence of atrocities came filtering in; Nuremburg was established after the war with the unswerving political will of the Allies to honor laws of war as it was through these that their own soldiers were protected in battle and capture. At this time, President Clinton initially spoke of Bosnia as a shooting gallery; conventional norms of warfare (Silber and Little, 1997) were by all reports not in play in the war zone.

Whether or not the ICTY was a token gesture by Western powers to defray negative press as the West demurred when action was needed, the mounting casualties day by day led influentials like Elie Wiesel to raise moral concern that the Holocaust must not be repeated while the West did nothing. However, collective memory of the embarrassing confusion and loss of life, both for soldiers and civilians, in Cambodia and the Vietnam War weighed against the plea from Raphael Lemkin echoing from the Holocaust in the 1940s, "If women, children, and old people would be murdered a hundred miles from here, wouldn't you run to help? why do you stop this decision of your heart" (Lemkin, 2002:26-27), when his own family were being slaughtered in Lithuania? The ICTY answered back across the years, as it became a determined force for justice over tyranny, for victims and survivors of aggressive warfare, atrocity and genocide over their oppressors.

However, the entry of western military forces into the bloodshed in Yugoslavia, 1991-1995, was not solely influenced by public opinion. The tipping point on increased involvement may have been the shooting down of an F-16 aircraft by a Serb missile, leaving its pilot trapped in enemy territory for six days. He was finally rescued by a US marine helicopter commando. The event has subsequently been recognized in the film *Behind Enemy Lines*. This was the single American life (Bass, 2000:216; Stephanopolis, 1999) that many who study American public opinion say broke the stagnation.

Structurally and institutionally other factors were configured into the decision. The human rights activists did continually apply pressure on public opinion. A prominent group in

international human rights, Human Rights Watch, in July 1992, called for the punishment of perpetrators of war crimes and genocide. Also in July 1992 the journalist Roy Gutman, with *Newsday*, published the first article on Bosnian Serb run concentration camps. Eventually names like Omarska, Keraterm, Trnopolje and Manjaca would be identified as places where atrocities and war crimes occurred like Sarajevo, Srebrenica and Ovcara, all written in savagery and bloodshed. It was only after the news of rape and atrocity in concentration was aired by the media and pictures of emaciated bodies of Bosnian men held captive by Serbian commanders were beamed around the world that the UN Security Council took initial steps to set up what later became the ICTY (Bass, 2000: 210). The resolution to setup a United Nations commission to gather evidence of war crimes went ahead, even with many of the Western powers involved finding the taking of war criminals to be an impediment to peace.

The commission of experts out of which the ICTY emerged worked slowly initially. The first chair of the commission, Frits Kalshoven, at first did not criticize the effort. Cherif Bassiouni, a law professor at DePaul University who sat on the commission did make criticism; he also fought hard for human rights. He could not tolerate UN stodginess in the face of a mounting death toll in Yugoslavia and began fundraising to get more investigative work underway. Through the MacArthur and Soros foundations he raised 2.4 million dollars to fund the evidence gathering. The UN had committed only \$900,000 at that point. With this he detailed evidence from 900 prison camps, 90 paramilitary groups, 1,600 reports of rape and 150 mass graves (Bass, 2000: 211). He did criticize the UN for foot dragging pointing to obvious instances of it, forcing the war to drag on longer. Eventually the obstructionism of Britain and France became part of the reason that Kalshoven resigned from the commission.

While Serbs claimed 70 percent of Bosnia in 1992, Bassiouni still saw no change in the commission's failure to carry out its mandate effectively. After US President Bill Clinton came into office, he sent his first secretary of state, Warren Christopher, to tour Europe and sound out America's allies on a) lifting the arms embargo against the Bosnian Serbs and b) launching air strikes against them. The European powers, however, felt air strikes would endanger UN troops already committed to the war zones in Yugoslavia; Clinton backed off the initiative. With sound reasoning, Christopher on May 18, 1992, said at a congressional hearing that Bosnia was "a problem from hell" (Silbur and Little, 1997: 287).

By May, 1992, the quagmire continued. France and Britain seemed to oppose a tribunal. At that point Madeleine Albright, America's United Nations ambassador, fought hard for it and on February 22, 1993, the Security Council unanimously passed a resolution inaugurating the International Criminal Tribunal in Yugoslavia (ICTY).

7. The ICTY: A struggle to do the job right

The formal title for this tribunal is The International Tribunal for the Prosecution of Persons Responsible for Serious Violations of International Humanitarian Law Committed in the Territory of the Former Yugoslavia since 1991. It represents a body of the United Nations established to prosecute perpetrators of serious crimes committed during the wars in the former Yugoslavia. It was instituted as an ad hoc court associated with The Hague (Netherlands), and called on to finish its work by December 31, 2014.

It may have been intended to be just another kind of reprimand rather than an actual court with indictments and defendants being tried. Albright doubted that any arrests would be made. Britain had 2,700 soldiers on the ground with UNPROFOR and France had 4,000. They both wanted their troops coming home without casualties. Meanwhile, Helsinki Watch complained that valuable evidence was disappearing every day. It took three months to draft a statute for the tribunal and get on with the selection of eleven judges. The process was fraught with contradictions and contrarities. In the end, the UN General Assembly made its choices and altogether it came out well, with three high profile judges, two from Egypt and one from Canada, and the chief judge being Antonio Cassese, an international law professor from Italy. Cherif Bassiouni was nominated by Egypt as one of the judges, and Richard Goldstone of South Africa was approved as chief prosecutor by the Security Council on July 8, 1994 (Bass, 2000: 213-224).

The judges were paid with an ad hoc budget until the end of 1993 as the tribunal confronted a host of minor obstacles and chief judge, Cassese, battled on past each one. To combat the underfunding and slow running forced by the UN on the tribunal initially, the judges themselves did fundraising. Goldstone's first indictment was the commander of the Susica camp in Bosnia, Dusan Tadic, who was accused of crimes against humanity in the summer of 1992. On May 7, 1996, he was the first war criminal to be tried in The Hague. Goldstone had come into office while Serb forces continued to besiege Sarajevo and other Bosnian towns. Cassese protested that the war was sustaining a bloodbath while the ICTY attempted to prosecute and the Western powers looked on, doing as little as possible. Bosnian Croat forces and the Bosnian government had been at war and the siege of Sarajevo had taken place while the tribunal had no power to enforce its data gathering mandate. Serbia actively blocked investigations and treated The Hague with contempt. Chief judge, Cassese, registered one protest after another. "Relying on a reluctant UN and NATO to enforce its edicts, the tribunal could only inconvenience and stigmatize its suspects" (Bass, 2000: 223).

After the shooting down of the American F-16 in Yugoslavia, NATO finally started bombing Bosnian-Serb positions. Difficulties still continued at the ICTY which still had a budget insufficient for witness protection and investigation. Goldstone issued indictments that, as with Tadic, were mainly of low level officials. Analysts held that he needed to prosecute the big fish, those who had ordered the killings and known of or not prevented war crimes. Once again, the Serbs were utterly uncooperative. The tribunal felt that if they could get even a mid-level leader he could be put on trial and release information leading to the arrest of those still higher in the command chain. Their determination did find fulfillment in many indictments including that for Milosevic who bore command responsibility for Serb paramilitary groups. By July 25, 1995, Goldstone went on to indict Radovan Karadzic, president of Republika Srpska from 1992-1996, and Ratko Mladic, a General in the Bosnian Serb army, for genocide and crimes against humanity. The 44 month siege of Sarajevo and the massacre at Srebrenica were instances of Mladic's blatant savagery. With Mladic leading his Bosnian Serb Army into Srebrenica, one of six Bosnian towns nominally under UN protection, Mladic is said to have bragged that the fate of Srebrenica's Muslims were in his hands (Rohde, 1998:179). Bosnian Serb forces under Mladic slaughtered more than seven thousand Muslims at Srebrenica. The day The Hague indicted Karadzic and Mladic, Mladic's forces took the UN safe area of Zepa (Rohde, 1998:329). Karadzic and Mladic were also responsible for the deaths of 12,000 civilians in the shelling of Sarajevo.

The slaughter at Srebrenica July 11, 1995 showed the world that only military force could stop the bloodletting between the warring parties. Madeleine Albright on August 10, 1995 blasted the Bosnian Serbs in a closed session of the UN Security Council. She unveiled U-2 photographs of mass graves near Srebrenica. At about that time, three senior US diplomats on their way to Sarajevo were forbidden to use Sarajevo's airport and had to take an armed personnel carrier through treacherous mountain roads. They met with disaster on the way. Their deaths had helped bring the US full scale into Yugoslavia (Holbrooke, 1999: 373). By that time, the balance of forces on the ground swung against the Serbs. With no NATO troops around Goradze and UN personnel gone from Serb territory, on August 29, 1995, NATO planes engaged a massive bombing campaign against Bosnian Serb positions and Holbrooke began directing a diplomatic effort to bring peace to the Balkans. He finally brokered a ceasefire signed by Milosevic and his then top general, Radovan Karadzic, on October 5, 1995. By November there was a gathering of leadership on all sides at Wright Patterson Air Force base in Dayton, Ohio. In December 1995 a NATO force of 60,000 IFOR troops moved into Bosnia bringing a sudden peace (Bass, 2000: 246).

Even with that, the ICTY had no protocol for making arrests of those indicted that was guaranteed by any specific legal entity for policing the peace in the Balkans after the Dayton Accord. Journalists could see that IFOR troops were making every effort *not* to encounter indicted perpetrators. They insisted that they were not a police force and did not want to get involved in the legal hassles of prosecuting those they could easily have apprehended. NATO and IFOR found themselves in 1995 taking defensive strategies against Goldstone and Albright—they would not protect teams investigating grave sites. The ICTY turned to a private humanitarian minesweeping organization, and “on July 7, 1996, at Cerska near Srebrenica, where IFOR feared to tread, mine sniffing dogs from the Norwegian Peoples Aid rushed in” (Bass, 2000:254; Rohde, 1998: 346-347) and did the job.

Despite all the obstacles, the tribunal and the United Nations were a presence in the Yugoslavian debacle that was historically unique. It sent workers to deal with the remains of massacres and war zones and detail what had happened from a forensics point of view. This brought dignity to the lives of those brutalized and killed who were without so much as a gravestone to honor their lives. Clea Koff (2004) who, as a Forensic Anthropologist with the United Nations participated in five missions in Yugoslavia and Kosovo, wrote as she worked in the Cerska area of Bosnia, “I felt anger toward people who deem murder an acceptable political policy. I felt the last of my naivete drain away as I uncovered more and more people shot while their hands were tied” (Koff, 2004: 138). She felt two kinds of duty to the murdered, first to identify who they were and “allow them to incriminate their killers,” and second, to help return their remains to their families. The ICTY was among the small number of institutions worldwide who brought this gift of decency and civilization to the civilian victims of the Yugoslavian wars of the 1990s.

8. Contributions of the ICTY

The International Criminal Tribunal for the former Yugoslavia (ICTY) was established by Resolution 827 of the United Nations Security Council on May 25, 1993. Its jurisdiction covered four clusters of crime consisting of 1) grave breaches of the Geneva Conventions, 2) violations of the laws or customs of war, 3) genocide, and 4) crimes against humanity. Various countries signed agreements to carry out custodial sentences. The maximum

sentence the court could impose is a life sentence for those tried and found guilty. Final indictments of the court were issued by December 2004, the last of which were confirmed and unsealed in 2005. The Tribunal will complete all trials by the end of December 31, 2014, complete all appeals by 2015. Exceptions to this are the trials of Radovan Karadzic whose trial is expected to end in 2014, recently arrested Ratko Mladic, and Goran Hadzic (ICTY Completion Strategy Report May 18, 2011) whose trial dates are pending. After the closure of the ICTY its responsibilities will be transferred to the International Residual Mechanism for Criminal Tribunals which will begin functioning for the ICTY on July 1, 2013. Goran Hadzic was the last of the 161 indicted fugitives to be arrested on July 20, 2011.

Since the first hearing of the ICTY held on November 8, 1994, 161 individuals have been indicted and 100 of these will have completed proceedings by 2011. Among those indicted by the ICTY, five of the one hundred have been acquitted, 48 have been sentenced, and 11 had their cases transferred to local courts. Another 36 cases were terminated because the defendant had died, or indictments were withdrawn. The indicted ranged from common soldiers to generals and police commanders to Prime Ministers. Among the (sitting or former) heads of state indicted were Slobodan Milosevic, Milan Babic, former President of the Republika Srpska Krajina, Ramush Haradinaj, former Prime Minister of Kosovo, Radovan Karadzic, Former President of the Republika Srpska, Ratko Mladic, former Commander of the Bosnian Serb Army, and Ante Gotovina, Former General of the Croatian Army. On July 21, 2010 commanders of the Kosovo Liberation Army, Ramush Haradinaj, Idriz Balaj and Lahi Brahimaj had their cases re-opened for trial. The Croat Serb general and former President of the Republic of Serbian Krajina, Goran Hadzic, became the last fugitive wanted by the ICTY to be arrested. On July 21. Of these Haradinaj (Kosovo) was acquitted.

This list is growing but remains dominated by top leadership involved in atrocity and war crimes. Initially there had been a fear among tribunal staffers that there would be a flood of low-level suspects (Bass, 2000: 261) with a very small budget to secure the integrity of evidence and prosecution of each person named. This was a critical weakness. With the tribunal being freighted with the burden of low budgets from the start, it could not protect witnesses appropriately. One of the tribunal's best witnesses of the Srebrenica massacre, for instance, said he might not testify because his family had no protection from Serb reprisals. (Bass, 2000).

After Richard Goldstone, decided to return to South Africa, Louise Arbour of Canada took over in 1996 as Chief Prosecutor. To the dismay of some, Arbour while not playing to the press, at the very start of her tenure in office, unsealed secret indictments. The military would have the element of surprise in apprehending them. The decision pleased NATO and the Pentagon, with great reason. They wanted accountability for the crimes committed. Smaller fish were still the majority of cases coming before the ICTY at that time, like the accused concentration camp commander, Zeljko Meakic, and Simo Drljaca who as police chief had been involved in ethnic cleansing in 1992 at Prijedor. Milan Kovacevic, the director of the Prijedor hospital and who together with Drljaca ran Omarska, were both indicted for complicity in genocide. Arbour was deliberate in her pursuit of those indicted by the ICTY, however, and finally Slobodan Milosevic became the first serving head of State called to account, then Milan Milutinovic, President of the Republic of Serbia, Nikola Sainovic, Deputy Prime Minister of the Federal Republic of Yugoslavia, and Vljeko Stojiljkovic, Minister of Internal Affairs of the Republic of Serbia.

By 1996, British commandos had picked up Kovacic while he was fishing in a lake not far from Omarska (Bass, 2000:267). Unarmed, he surrendered and was taken to The Hague. Drljaca, living up to his violent reputation had drawn a pistol and fired on the British commandos when they moved away from their helicopter. SFOR's rules of engagement permitted them to take him down, and they did so. NATO was supportive. Republica Srpska reacted with anger, condemning the killing. This change of politics in SFOR and the West in general toward a robust arrest process for indictees of the ICTY was denounced by Russia who warned Britain to launch no more "cowboy" raids. The French proved a poor second in terms of the bravery it took to carry out the work of arresting and prosecuting those well known for their savagery during the ethnic cleansing process. The slow process of apprehension and detention of inductees continued until the 1998 War for Kosovo began. Slobodan Milosevic's 1987 repression of the ethnic Albanians in Kosovo. This leader's repression of the ethnic Albanians in Kosovo triggered the 1991-1995 wars in the former Yugoslavia. Milosevic brushed off attempts to negotiate a deal with the moderate Albanians (Rogel, 2003:176). Nearly ten years later, Richard Holbrooke, drawing on ties to Slobodan Milosevic developed on earlier diplomatic tours, got Milosevic to agree to a monitoring force for Kosovo, the Kosovo Diplomatic Observer Mission (KDOM). In late September, 1998, the United Nations Security Council issued Resolution 1199 calling for a ceasefire between Serbs and Albanians. This time, the United States favored intervention. Under the suggestion from French president Jacques Chirac, that the situation be defined as a humanitarian emergency. NATO could now justify its involvement. In what Igor Ivanov of Russia, exasperated with the Serbs, especially of Milosevic's tedious brother who was then Serbian ambassador to Moscow, said he would not support United Nations intervention but would support NATO. KDOM (Kosovo Diplomatic Observer Mission) and KVM (Kosovo Verifying Mission) approved by Holbrooke and Milosevic in October, monitored the violence.

The violence in Kosovo nevertheless did escalate, and on January 8, 1999, forty-five inhabitants of the Albanian village of Racak were massacred. Serbs were to blame. The KVM confirmed this. NATO saw intervention as imperative. Great Britain, Germany and the United States prepared to become an occupying force (KFOR). A last attempt at diplomacy was organized with Serbs and Kosovars summoned to a peace conference in Rombouillet, France set for February 6, 1999. Serbs treated the conference as a lark (Rogel, 2003: 177). Albania, however, worked hard to get Albanians to sign the peace agreement. Kosovars could benefit by signing and Madeleine Albright promised them a referendum in three years. After consulting Albanians at home, the Kosovars signed. As expected, the Serbs did not, and so the Kosovo War began on March 24, 1999.

At the start of the 1999 war, Milovic purged all but hard-liners in leadership in the Serbian government and police. He then sent forty thousand military personnel and police in or near Kosovo to put pressure on the Albanians of Kosovo, but to no avail. A 'virtual war' (Ignatieff, 2000:53-56) ensued thereafter. Kosovars had generally welcomed NATO engagement and fled to Albania, Montenegro and Macedonia in large numbers. More than 848,000 fled during the conflict. As they left, Serbs confiscated their homes and property ownership documents making it difficult for them to return.

NATO's involvement in military action in the Kosovo war had to be granted by the full body of NATO countries. This required nineteen supporting signatures from member

countries. The head of NATO, Javier Solana of Spain, secured these. It was the first “high tech” war ever before staged. General Wesley Clark of the US directed operations. NATO’s part in the war was carried out exclusively by air, from heights of 15,000 feet in order to avoid NATO casualties. Mission reports each day were by e-mail video and, twice daily, the general held teleconferences “to coordinate this war waged by committee “ (Rogel, 2003: 178). Ground assault troops were never used; NATO used ultramodern technology operated by a NATO crew of 15,000 who were assisted by 30,000 technicians. Air power alone won through using strategic bombing. Though, about fifty percent of Kosovars had crossed into Albania or went elsewhere before the action started, ten thousand Serbs and Albanians were killed in bombing runs. There were two NATO casualties. Russia pressured Serbia to call a halt, however, the Serbs were unwilling to surrender. Fighting was concluded with a Military-Technical Agreement. The brilliant win of NATO over unrepentant leaders of savage ethnic cleansing throughout the 1990s who could not be convinced to relent and submit to the jurisdiction of the ICTY after the Dayton Accord, were determined in 1999 to pursue nationalism Serbian style. Attempts by the United Nations, NATO and The Hague to censure and quiet this process were mocked by those in power in Serbia. The process was complex and critics in a confusion of concerns accused leaders and organizations in the powerful West of being the violators of ethical codes. The West was accused of foot dragging when it would not get involved in stopping ethnic cleansing between 1991 and 1995, and immoral when it did finally enter a messy civil war.

9. Aftermath of the 1990s wars in Yugoslavia

Looking at the atrocities in Bosnia under Serb attack and the possible pernicious effect on collective memory of those targeted in each separate area of the former Yugoslavia where atrocity had occurred, over the entire decade of the 1990s, every group eventually carried scars from traumatic experience (Herman 1992; Staube, 2006:867-894) of some kind and degree. In the end, the goal was to recover peace and return to normalcy.

After the 1990’s wars, 85 percent of the emigrants from the ethnically diverse areas of Bosnia and Herzegovina to Serbia and Montenegro were Serbs (Lukic & Nikitovic, 2004:88-89). They made up 36.7 percent of the total population of Serbia in 2001, down from 43.1 percent in 1996. The ethnic push factor during war did not stand alone, however. Higher levels of education were also positively associated with the move. Statistics show that highly trained and professional migrants were heavily represented in the postwar migration. Younger, better educated migrants opted for resettlement to distant regions offering better economic conditions. This meant that a large portion of migrants moved to the large urban center in Belgrade. This allowed them to retain their former lifestyle or better it. In turn, though initially they competed for jobs available to citizens of Serbia, for the longer term these refugees stood to benefit that nations’ economic recovery. In this sense, the halting of atrocity and warfare of the 1990s brought by the Dayton Peace Accord (1995) did help end the violence (Rohde, 1998; Honeg & Both, 2001) and led to normalization and recovery of community. It was however insufficient and late for many who experienced the horrifying intensity of human rights abuse. Multi-ethnic communities had been segregated, slaughter had followed “brotherhood and unity, western powers had helped, but not readily when it was first needed. The ICTY brought justice processes against perpetrators, but more would be needed for reconciliation to repair the breach of trust.

10. Conclusion

Bass (2000:301-302) notes that establishing the truth so as to debunk claims that no atrocity occurred is one of the major gains brought by the United Nations in constituting tribunals like the ICTY. By bringing justice along with truth, tribunals lessen the chances for private, uncontrolled vengeance. Leaving justice entirely to the victims is hardly likely to produce anything more than suspicion and bitterness as the road to the future. Where local courts are left to bring justice to victims and perpetrators, they tend to bring unhelpful harshness (Bass, 2000:309-310) and the danger that politicization might trigger a backlash. The tribunal also removes or limits leaders with known ties to war, atrocity and genocide so that the pathway to peace and recovery is further assured. Madeleine Albright in Pristina in July 1999, noted that justice is the parent to peace (Bass, 2000:284). When she visited The Hague and addressed a statement to the ICTY in 1997 she said, "Justice is essential to strengthen the rule of law, soften the bitterness of victims' families, and remove obstacles to cooperation among the parties." The ICTY established a model for resolving ethnic differences by "the force of law rather than the law of force."

Future research should examine the unique difficulties of mounting multi-national efforts requiring combat, different ways of adequately funding such operations so that there is efficient and effective action when war, atrocity and genocide egregiously threaten civilian lives (Power, 2002:397; 401-403; Hagan and Ivkovic, 2006). Part of this would involve studying how to deal with the problem of militarized refugee populations (Kenyon Lischer, 1999; Kushner and Knox, 1999). New research should map the aftermath of violence and how various kinds of organizations can more effectively focus on getting funds to those living in former war zones. Every effort should be made to promote economic revitalization of devastated communities. National entities benefitted by justice processes should be allowed entry into the global community (Miller et al., 2011:68-91) so as to give the next generation a basis for hope (Jones 2005). The valiant judges and staff of entities like the ICTY should not have to fight intransigence and bad faith to even get to the point where they can do their jobs. Finally, new research should continue to explore the positive effects of transitional justice mechanisms (Sikkink and Booth Walling, 2007) in maintaining and sustaining peace.

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The Power of Words: Inmates Write Stories of Life and Redemption

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1. Introduction

Prison is a place of uncertainty where the narratives of those incarcerated unfold. For most of the students I encountered in the writing workshop I formed at San Quentin State Prison, prison was a place of waiting, where anger is muted and friendships are forged across unlikely boundaries. Within this dehumanizing context, writing becomes an act of therapy, resistance and community building. It can also be a dangerous act because it encourages the remaking of selves despite confinement.

San Quentin State Prison, the oldest, largest and only death row prison in California. Opened in 1852, the prison is located in Point San Quentin, a village with its own zip code, on luxurious waterfront property valued at upwards of \$664 million (Department of General Services, 2001). The prison was built with a capacity to hold 3,302 inmates, but in recent years it has held as many as 5, 247 (San Quentin State Prison, 2009).

In 2010, 1,404,053 persons were incarcerated in state and federal prisons in the United States (Pew Center, 2010). Approximately 1 in 100 adults is living behind bars in America (Public Safety Performance Project, 2008). Most of my students have been African American, Latino or Native American. In the United States the differential rate of imprisonment of African-Americans to Caucasians, proportional to population is in excess of 7.5 to 1 (U.S. Bureau of Justice Statistics, 2010). The differential rate of imprisonment of Latinos to Caucasians is about 5 to 1 (U.S. Bureau of Justice Statistics, 2010). Annually, over 700,000 inmates are released from prison to home. A recent study by the California Department of Corrections and Rehabilitation notes that most California parolees are back in prison in three years (Egelko, 2010). The same study notes a decline in imprisonment within the first year of release, but finds that the three year recidivism rate has increased. The study found that 70% of imprisonments over the past three years were for parole violations rather than convictions, and that the highest recidivism rate, 75% over three years, was for parolees ages 24 and younger. Although the incarcerated wait to be released, when released they often set off on paths that return them to prison.

I taught a writing workshop at San Quentin after volunteering for five months in a prison classroom. As a classroom volunteer I taught writing to thirty or forty students at a time for one or two hours per week. This teaching helped me establish strong relationships with students, but it precluded the opportunity for the men to develop as writers and as a

community. I switched formats and began holding a writing workshop for three hours per week in 12 week sessions. Participants voluntarily signed up to participate in the workshop. Each workshop had ten to fifteen men, but because prison life is transitory, a number of men would stop in each week, so the group consistency changed constantly. Within each 12 week session a core group of students would take shape, and from that core frequently emerged leadership and strong writing.

Students in the writing workshop were supported by the writing group as they created and maintained their intellectual and creative selves through writing about their lives. Inmates, often with the help of projects such as this one, can maintain and fortify their lives inside prison through writing, and participating in critical discourse. In these ways inmates practice a way of living that is creative and forward looking in the face of daily violence and systematically produced hopelessness. Much of the writing produced in the workshop was raw and immediate which was connected to the writing community we created together.

2. Writing the self

Each week I sat around a table in a prison classroom with my students in the H unit of the prison. The writing that emerged had some general similarities. In writing about their lives each author was writing with an insistence that his voice mattered and often sought redemption from many regretful actions through reflection. In this way the writing became a way of constructing the self within a community, contributing to the greater good of the writing group, and helping authors create new meaning from their life experiences. Although the men were encouraged to get along as a community in prison, many of our discussions focused on individualism and the redemption of individual lives, as well as the return to their families. The inmates survived under conditions that would break most of us on the outside in far less time than they endured them, but through writing it was possible for them to uncover new perspectives on themselves.

Life stories, such as the ones that emerged in the workshop, offer insight into how a person has come to be who they are. Inmate writing focused on every stage of life from childhood to adulthood. Autobiographical narratives of this sort are not intended to convey the reality of what happened in the past (Schacter, 1996), since life stories communicate more about what is going on for a person in the present (McAdams, 2006). In this way, this kind of writing is personal as opposed to the mere documentation of actual events (Bruner, 1990; Cohler, 1982; McAdams, 1985). Such stories exist as evolving narratives of the self that portray how a person understands her or himself in the moment, or who she or he could become in the future (Bruner, 1990). Through constructing narratives individuals are trying to understand the present and construct a future they can inhabit.

When inmates have the opportunity to be a part of a writing community, that community takes on a heightened sense of urgency and importance. Students wrote about any topic that was of interest. Part of our class was devoted to writing exercises, while the other part was given to sharing stories that were written inside and outside of class. Students wrote about their experiences as a powerful way of expressing their agency and power in an environment that denied both. The act of writing, in this way, assisted students in envisioning new life themes and plots.

3. Redemption stories

Students wrote stories for their children, parents, grandparents, lovers, spouses, and friends. Many times these stories were expressions of sorrow, love, redemption and hope. McAdams (2006) notes, "redemption is the deliverance from suffering to an enhanced status or state" (p. 88). McAdams further notes that redemptive stories do more than make sense out of a life, "They reflect social norms, gender stereotypes, historical events, cultural assumptions, and the many and conflicting narratives that people grow up with and continue to hear, experience, appropriate, and reject as they move through the life course; and life stories about how to live replace old ones" (p. 95). Our lives, then, are heavily influenced by how we understand events through the stories we construct.

Kenny Gonzales, a 42 year old Latino incarcerated for dealing drugs, attended the workshop for two years. His story, *A Happy Thought*, focused on a trip he took to Disneyland with his daughter. In this story Kenny focuses on the wide gap between the way the world is and was, and the way it should be now. The story adopts a firm tone of compassion as Kenny strives to paint a portrait of a time in the past.

The memory is so strong I can all but touch it. We were down in Anaheim doing the Disneyland thing. This was not our first trip there and I had learned to take a day off and just hang out at the motel. We weren't staying at the Disneyland Hotel, but we found plenty of things to do. First, we went to McDonalds for breakfast and what ten-year-old doesn't like McDonalds? My daughter had pancakes. I had the smile on her face. Then it was back to the room for some TV and jumping on the bed. We were having a great time and I could not believe how much she was enjoying the movie that was on, *Hot Shots Part Two*. Lunch time and we were back at McDonalds. After that it was pool time, something we both enjoyed there or at home. A much more physical experience for me than for her, as she loved the crazy inflatable dolphin toy. A silly thing I got to entertain her. It was a beautiful day.

Kenny's story affirms the power of testimony in healing from trauma (Kenyon & Randall, 1997). Events in his story are arranged according to their chronological order as his memories are explored through the language used. His description helps to employ imagination in cobbling his story together. What can he do when what is and what ought to be do not match up? This is the foundation of the simplest moral experience and it is bound to understanding an experience and forming ideas about it.

What we did next only she could save me from. We knew there was a miniature golf course down the road. The walk after being in the pool was one thing, but the heat was another. Like always she made it fun. She made me understand that all my time with her was precious and I knew then that I was living a special memory, a special moment, and a special time. A moment I have obviously kept with me for 17 years and will retain until my mind or body goes. We made it there and back in one piece enjoying every second of it. We went for a dip in the pool and settled in for some more TV. We ordered a pizza, salad, wings and sodas consuming them at our leisure. Then just about 9:00 PM we put our chairs just outside our room to watch the fireworks from Disneyland. When the fireworks were done, so were we. Never before and not since have I gone to bed and sleep so contently.

Prison can be a place where people shut down internally, but in this story Kenny rises above that reality and seeks a new understanding from his life. In the final paragraph of his story Kenny offers insight into his *second chance* or redemption.

My reason for sharing this story is simple. Naturally, I love my daughter so much, but more importantly all who read this story will have a chance to at least feel the kind of clarity that my daughter gave to me. The wisdom to understand it isn't always about what is next. She taught me to live in the moment because this is our only to chance. The lesson I learned from her was to never look back wondering where the time went. Instead, I live life to the fullest and will learn what I can.

Kenny learned through the process of writing this story that he is not alone and he learned that with and from other detainees in the writing workshop. He acknowledges with grace that his daughter helped him make sense of his life story. Personal writing, like Kenny's story, has a function of preserving personal identity inside the rigid, uniform prison walls. For Kenny, this story evidences his acceptance of his situation and his desire to strive to be a better person. He tells us to "live life to the fullest" and not wait to love or care because circumstances can change. This is Kenny's deliverance and the reader is provided a window into Kenny's enhanced state of appreciation for what life has to offer him in a future, something he is beginning to imagine.

John Peter Wilks, a 50 year old African American incarcerated for drug dealing, wrote about his girlfriend Robin, who died from a drug overdose in *My Red Headed Dead Head*. He writes:

I was hysterical when I found out that my girlfriend, Robin, was in the hospital. Based on the phone call I received from her friend Rebecca, I had loosely gathered that Robin and Rebecca had started shooting up again. They had been renting a room at one of the run down Pakistani hotels in the Mission. Unbeknownst to me these illicit meetings had been occurring for almost a month right under my nose. The whole time I had the impression that Robin was on her daily methadone maintenance which she had begun earlier in the year. It was I who had walked with her hand in hand to the detox clinic. I was so proud of her decision to quit heroin. Our mutual friends had told me it was only a matter of time before she started using again, but I wouldn't listen. I had faith in her and now she was in the hospital.

As John Peter begins his story his struggle emerges. It is unlikely that he did not know that his girlfriend had begun using, but for the purposes of the story, and for processing his pain, he casts himself at a distance. Doing this allows him to reflect by taking a new point of view. Later in the story he writes:

Someone tapping on my shoulder woke me. I opened my eyes and there was a young woman kneeling beside me. She was wearing a cap and a paper surgical mask over her mouth. Her scrubs had little pictures of Sponge Bob Square Pants. She unsnapped her mask and removed her cap. She had dark hair and sympathetic hazel eyes topped with long eye lashes. She told me her name was Dr. Tandler. I didn't think I could handle what she was about to tell me. With a deep sigh she told me that Robin had developed an abscess from her drug use. Apparently, the abscess killed her. Robin neglected seeking medical attention. They had tried a transfusion. They did all they could. She was deeply sorry for my loss.

Faced by this dauntingly sad experience John Peter allows the story to give way to an experience of growth in the end:

Whenever I'm in the Mission acquaintances of Robin, who are practically strangers to me, still approach me and offer their heartfelt condolences. It has been suggested that I should write about her death in depth and maybe one day I will. I will start that story on the day that Robin's best friend, Rebecca, and I started our recovery. We became clean and sober the day Robin died.

Although devastated by Robin's death, John Peter emerges from the experience with renewed confidence that it is possible to overcome drug addiction. Although we know his recovery was not successful, since his drug addiction ultimately sent him back to prison, in writing the story of Robin, John Peter is demonstrating renewed agency and hope that he will make a new life upon his release. We can only hope that he will be successful.

Seeking redemption in the prison context has intense meaning. Inmates are marginalized and forgotten by loved ones and society. Finding hope under such circumstances delivers them from their oppressive mistakes and life experiences. Unlike McAdams (2006) who argues redemption stories contain specific elements, the redemption stories in this workshop took on no particular form or pattern, but instead were identified by an orientation to a hopeful future and a desire to change a future self through forgiving and remaking the past.

4. Conclusion

Writing and constructing life narratives provides meaning and purpose while providing explanations for the decisions a person has made. Any kind of life story can help a person construct new meaning. In the two stories shared in this chapter the writers approached redemption in slightly different ways. Kenny wrote an idealized memory and transmitted his desire to live in the moment and appreciate all life has to offer revealing his desire to embrace a new way of living. This is a revelation in understanding his life. John Peter constructs a redemptive story that focuses on death and rebirth as his story turns to redemption as his commitment to overcome his drug addiction is revealed. These stories are examples of narrative self-making (McAdams & Bowman, 2001) and through writing these stories Kenny and John Peter were able to construct their future selves in preparation of their release.

At a time when local economies are collapsing, the prison industry continues to grow. This increases the importance of writing projects in prisons. Prison policies are often based on distorted stereotypes that effect the experiences of inmates. Writing in the prison context does more than keep inmates going, it helps recreate their lives through reflection and meaning making. This project, which falls in the tradition of social science life writing, gave writers voice and an opportunity to write their stories. By learning about and listening to their stories we can understand how each person struggles to construct their life through words.

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Section 6

Multilingual Settings and Integration

The Challenge of Linguistic Diversity and Pluralism: The Tier Stratification Model of Language Planning in a Multilingual Setting

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1. Introduction

Research crystallized by UNESCO leads to the observation that contrary to popular opinion, **multilingualism is the norm in human societies and mono-lingualism an exception**. Most countries of the world are multilingual. There are over 6600 languages in the world and about 2 086 in Africa (Ethnologue 2009). Africa is the most linguistically diversified continent. All African countries are multilingual in varying degrees; from two or three languages in Lesotho, Swaziland, Rwanda and Burundi to over 450 in Nigeria (Ethnologue 2009)

It is also now axiomatic that multilingualism is not an obstacle to development but merely a challenge to policy formulation and implementation in the service of national development. The challenge of nationalism throughout history and more especially in the present millennium is to build a strong economically viable pluralistic nation from ethno-linguistic diversity. In line with UNESCO's position in favour of the maintenance of linguistic and cultural diversity (UNESCO 2003a), we motivate propose and justify a **Tier Stratification Model of Language Planning** that seeks to guarantee nationalism and pluralism over a foundation of a vibrant ethno-linguistic identity. The model seeks to make it possible for languages to be maximally utilised in the **public sphere**, such that each language community can conserve, preserve and maximise the development of its ethno-linguistic identity and ensure the optimal use of its language at some level(s) of the public sphere while participating fully in the social, economic and political life of the nation.

2. Linguistic diversity and ideology paradigms

Recent scholarship on linguistic diversity and multilingualism has been focused on language **endangerment** and language **maintenance**. Languages that are functionally vibrant and full of vitality may become endangered by losing their vitality as a result of a conjuncture of social, economic, political and linguistic factors and go through varying phases of attrition or progressive weakening resulting ultimately in language loss or language death. (See for instance Fishman 1968, Brezinger 1992, 2007, Mackey 1997,

Grenoble and Whaley 1998, Nettle and Romaine 2000, Mkude 2001, Crystal 2000, Mufwene 2001, 2004, Batibo 2005 and Chumbow 2009 and 2011a among others). To prevent endangered languages from dying, appropriate measures must be taken to ensure their **maintenance** by way of **revitalisation** or the process of re-enforcing their vitality (Cantoni 1965, Landwear 1990, Fishman 1991, 2001a,b, Romaine 2002, UNESCO 2003a, Chia 2006, Grenoble and Whaley 2006, Skutnabb -Kangas 2011, Kan Yagmur and Ehala 2011, Zaidi 2011, Ojongkpot 2012 among others).

Not everyone accepts the virtues of maintaining and cultivating linguistic diversity by undertaking a systematic implementation of revitalisation processes to ensure linguistic diversity and multicultural pluralism. As mentioned in Chumbow 2009, two conflicting ideological positions arise with respect to language diversity and language maintenance which we characterise below:

2.1 Nation building by way of assimilation

This is an ideological paradigm which favours the replacement of minority languages and cultures by a majority **dominant** language and culture. Linguistic and cultural assimilation is a process whose finality (within the context of a hidden or open agenda), is the loss or death of the minority languages and cultures, usually within the space of three generations. Underlying the paradigm of linguistic and cultural assimilation is what Gogolin 1994 (cited by Benson 2011) calls the **monolingual habitus**; that is, the (un)conscious belief in the uniformity of languages and cultures in a nation state or *a one nation one language credo*.

Cultural assimilation may be conscious and planned, and therefore **ideological**. It may be unconscious and unplanned in which case it cannot be said to be ideological. Cultural assimilation whether ideological or not, is the result of the unfavourable balance of power against the minority language and culture. The **dominant** language and culture usually assimilates the *weaker* language, where **dominance** is determined by such factors as the prestige status of the language, the number of **valorising functions** (economically viable domains in which the language is used), etc. (See inter alia, Chumbow 2008).

From the ideological perspective, cultural assimilation may be and is often used as an instrument of power to ensure the hegemonic domination of a cultural group by another or as an instrument to counter linguistic diversity and multiculturalism. Whereas cultural assimilation as an instrument of power may be dismissed as an agency to impose cultural and linguistic imperialism, the instrumentalisation of cultural assimilation to counter cultural and linguistic diversity is rationalised by the assertion that multilingualism and multiculturalism are sources of socio-economic inequalities. Some proponents and adepts of linguistic and cultural assimilation rationalise their position by the assertion that the assimilation of cultural minorities by the cultural majority is in reality, doing the former a favour, because the minority now can join the majority group and cease to be stigmatised and disadvantaged as a minority group. Thus, ideologically, assimilation is the instrument by which multilingual and multicultural communities can become monolingual and mono-cultural voluntarily or involuntarily as an outcome of cultural and linguistic imperialism.

2.2 Nation building by way of pluralism

This is an ideological paradigm which seeks to maintain and develop each linguistic and cultural heritage within the nation-state as a core consideration in the enterprise of nationalism and nation building. Such an ideology, naturally favours linguistic diversity, multilingualism and the pluralism of cultures.

As underscored in Chumbow 2010b and 2011a, pluralism is patently the more dominant paradigm in the face of UNESCO positions in favour of linguistic diversity and cultural pluralism (UNESCO 2003a, b, c) as well as the African Union's Charter of Cultural Renaissance (AU 2006a and the Language Plan of Action for Africa (AU 2006b).

2.3 Arguments in favour of linguistic diversity and pluralism

If the UNESCO's position enjoys an ascendancy that results in the dominance of the Pluralism paradigm which is fast becoming the object of a global agenda, it is precisely because of the intrinsic appeal of favourable fundamental arguments of a factual nature. Justification for cultural pluralism comes first from the incontrovertible facts of linguistic and cultural diversity. There are also independent arguments in favour of ensuring the **maintenance** of each existing language and culture within the nation-state as opposed to eliminating multilingualism and multiculturalism by the instrumentality of ideological cultural assimilation and **linguistic genocide**. These are discussed in the UNESCO articles on linguistic diversity as well as in most of the articles on revitalisation cited above. They have been discussed in detail in Chumbow (2009) but will be summarised briefly here in view of their relevance to subsequent discussion of our model of language planning for a multilingual setting.

- **Multilingualism is the norm and monolingualism, the exception, globally.** (Chumbow 2009).
- **The languages of a nation are its natural resources** (on the same level as its cocoa, coffee, gold, diamond or petroleum, etc). Like all natural resources, they have to be (planned, developed) exploited in order to be effectively and profitably used for national development. (Chumbow 1987).
- **The co-existence of two or more languages is rarely in itself the cause of tension, conflict, disunity and war.** On the contrary, historical evidence shows that it is economic, political and religious factors that cause conflict, tension and war (Fishman 1986, Baker 2003).
- **Language is a historical heritage and is consequently a repository of the history of humanity.** If one language disappears, a world vision of mankind is lost and the world is the poorer for it (UNESCO 2003 a).
- **Language is an element and a vector of culture.** (Nettle and Romaine 2002:114). The loss of a language amounts to the loss of irreplaceable cultural monuments.
- **Language is an intimate means of personal identity.** Language loss amounts to a loss of identity (Fishman 1998).
- **Language is a right; a human right of the same level of importance as all other inalienable human rights.** All languages have the right to be developed and used by those who speak them for their own development. All forms of linguistic discrimination should therefore be fought and countered (Skutnabb-Kangas and Phillipson 1995).

These and many other arguments have led UNESCO (2001 and 2003abc) to take position in favour of the **conservation** of linguistic and cultural diversity. To this effect, the year 2001 was declared the year of **the mother tongue** in order to focus on the importance of the first medium of expression acquired in a natural setting and used by the human *genus* to express his/her ego and innermost thoughts.

2.4 Linguistic diversity and language management

Linguistic diversity and multiculturalism may be desirable and perhaps inevitable as indicated above, but it must be admitted that this situation is inherently prone to a number of problems real, potential or virtual. Ethno-linguistic identities if not channelled and bridled by a spirit of nationalism may become the source of misguided ethno linguistic loyalties that undermine nationalism occasioning dissention, tension and conflict resulting eventually in what Calvet 1998 has called ‘**les guerres des langues**’ (the war of languages). However, as has been pointed out by Fishman 1986 such ‘language wars’ (where they surface) have little to do with **language** per se but result from the mismanagement of ethno linguistic diversity and multiculturalism. In other words, language related conflicts are ultimately a consequence of the social, economic and political inequalities that characterise and polarise ethno linguistic communities within the nation-state

The proper management of languages in a multilingual setting in accordance with well known policy principles is therefore indispensable in stemming the potential tide of ethnic polarisation within the nation’s fabric and ensuring linguistic rights, national integration and national development of all the different communities.

We propose, characterise and motivate below, a model for language planning and management in a multilingual situation..

3. The tier stratification model

Drawing from Jurgen Habermas’s concept of the ‘**public sphere**’ (Habermas 1965), we adopt and adapt the *concept (public sphere)* in the context of language planning for national development in a multilingual pluralistic nation-state. The nation is conceived as the **Public Sphere** which is bifurcated into the **private realm** and the **public realm** (each responding to similar or different sets of micro and macro language planning activities) as summarised in the diagram below.

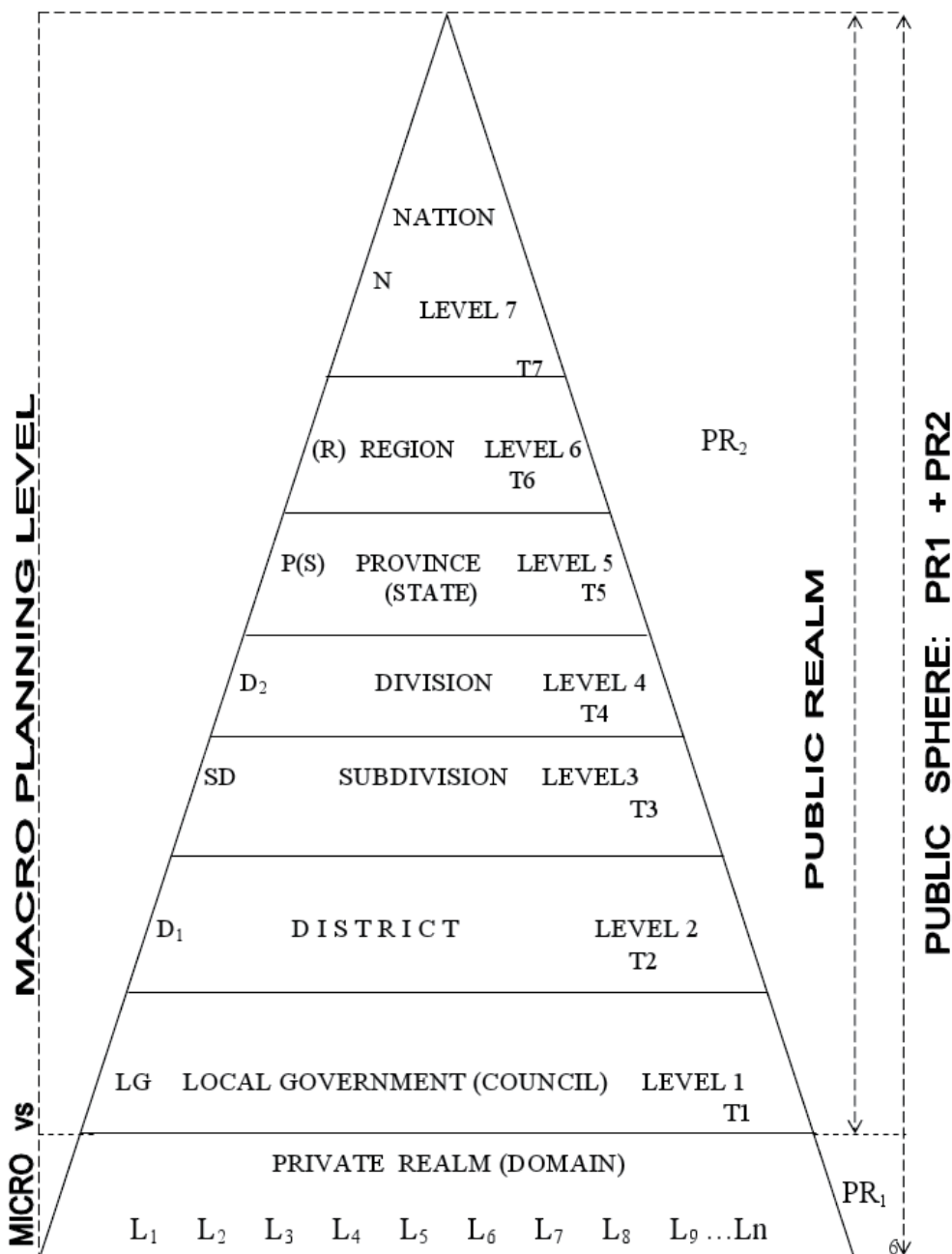
3.1 Public sphere

All languages of the nation-state belong to **the public sphere**. This underscores the tenet of **pluralism** and the need to ensure and guarantee a place in the sun for each ethno-linguistic community in a pluralistic national community.

3.2 Private realm

All languages indigenous to the nation belong to and make maximal use of the **private realm**. Foreign languages that do not have mother tongue speakers within the nation-state do not belong to the private realm but those that do, belong. Thus English in South Africa will belong to the private realm (as well as the public realm) whereas in Lesotho, it will

belong only to the public realm. The private realm is characterised essentially by the **identity function** of language as a mother tongue of those who acquire and use it as a first language.



Key: L= Language; Ln= any number of Languages; T=Tier

Fig. 1. Tier Stratification Model of Language Planning in the Public Sphere

3.3 Public realm

Some languages of the Private Realm along with exoglossic or foreign languages required as languages of interaction with the global community, (which may or may not belong to the private realm), are selected to constitute languages of the **Public Realm**

3.4 Public sphere and the dialectic between the public realm and the private realm

After a general definition of the public sphere and the private and public realms, it is important to clearly articulate here, for the purpose of operationalisation of terms, the concept of **public sphere** within this model and the dialectic relationship between the **private realm** and **public realm** as components of the **Public Sphere**

The **public sphere** in this paradigm is the aggregation of the private and public realms. Recall that *grosso modo*, the languages of the *private realm* include all the ethno-linguistic community languages and languages of the *public realm* are those selected to play a significant role in education or administration etc. at any of the administrative tiers or levels (local government, provincial or regional, state or national levels etc...see the diagram). The private realm does not mean an unimportant realm but rather it constitutes the foundation or base on which the languages of the public realm are firmly grounded. This underscores the fact that the discourse of national development in the public realm or at the national level, must take into consideration the multilingual and multicultural realities at the base or private realm. Put differently, in the public sphere or national territory, policy for the mega language(s) that function as official languages, should be inextricably linked (by planned policy) to the reality of the ethno-linguistic diversity at the base. Ultimately, there should be a bidirectional flow of information from the base to the top and vice versa, or from the official and national language(s) to and from the community languages etc. The essential concern here is that information and development relevant knowledge available in the public realm (disseminated in the official or national languages) should ultimately be made available to the private realm by the use of community languages which are better known and understood by the local populations.

In this way, the fruits and by-products of development will be shared by the national community thus eliminating the present state of affairs characterised by the **marginalisation and exclusion** of the rural communities whose community languages are presently not involved in the national development discourse.

The public sphere in relation to tier stratification is made up of the tiers of recognised administrative units plus one (the additional tier being the fundamental tier of the private realm). Thus, the **tiers** vary from country to country, depending on the core administrative units recognised by the nation (from local government units, or municipalities (councils, counties, etc) to provinces or states). The private realm is the basic or fundamental tier of the home or community where every language is spoken as a mother tongue and means of ethno-linguistic community identity and the other tiers belong to the public realm where language use is essentially intended to assure inter group communication beyond the home as illustrated in the above diagram (Fig 1).

Language planning at the public realm is at the macro- planning level. The number of **tiers** in the public realm is equal to the number of state recognised administrative units.

This underscores the fact that good governance in a pluralistic state presupposes decentralisation in consonance with boundaries of natural affinities determined by cultural bonds and /or geographical contiguity. Policy at the public realm aggregates and considers situations at the base, ensuring that local (rural ethno linguistic) communities are not marginalised.

4. Language planning in the public sphere

In section 1 above, is asserted the fact that a major threat to pluralism in multilingual communities is language endangerment leading to attrition, assimilation, language loss and language shift. As underscored in Chumbow 2009, " in any linguistic contact situation in a multilingual setting, the default tendency is the '*law of the jungle*' or *survival of the fittest*. The mega languages which are functionally dominant and powerful tend to gradually and inexorably 'consume' the smaller languages if left alone. Therefore, acceptance of a policy of pluralism by way of a *credo* in linguistic diversity in the enterprise of nation building **ipso facto** entails a commitment to language planning to ensure *revitalisation* of threatened, less dominant endangered languages and **revalorisation** mechanisms to ensure language **maintenance** i.e. the maintenance of inherent or acquired vitality of all languages of the public sphere. This has led to an upsurge in the development and implementation of language revitalisation and language maintenance mechanisms, principles and techniques especially since Fishman 1991 and UNESCO 2003a. This, in turn, has given rise to what I may conveniently call **counter- endangerment activities** and **counter endangerment scholarship** in language planning.

All of these endeavours clearly underscore the need and significance of language planning in a multilingual setting. While language planning has a long history of existence and vibrant activity, UNESCO's recent focus on linguistic diversity and its **counter endangerment posture** has given the enterprise of language planning a new impetus and today, scholarship in language planning stands in need of effective models that take into consideration the facts of linguistic situations (the multilingual reality and endangerment) and national objectives.

4.1 Macro - Planning level

Within the Tier Stratification model, Language Planning at the **Macro-Planning Level (Ma PL)** involves taking measures of status, corpus and acquisition planning (in the sense of Cooper 1989), to provide and envisage solutions to language problems of the nation-state at all levels. Ma PL covers either policy formulation or policy implementation in the (sense of Chumbow 1987) or both.

Macro-language Planning therefore takes place when both the private realm and the public realm (or any parts of the public realm) are involved. Thus a decentralised administrative unit like a Municipality or Council, Province or State (in a Federal system of governance) can undertake planning at its own level or administrative tier covering both ethno-linguistic communities (Private realm) of its jurisdiction and hierarchically higher tiers (Public Realm). However, generally, macro-planning is best undertaken at the national level and consecrated by a National Language Plan (of Action) resulting from a Language Charter/Law or Act (Chumbow 2010c). A national language policy based on a judicious

consideration of the sociolinguistic variables and the aspirations for the people, a policy that is properly formulated, articulated and consecrated by a language law or language act, provides a framework of implementation in consonance with the vision and mission that the nation or state has set for itself.

The state may be expected to set up a Central Language Authority in the form of a “Language Institute, Language Centre, Language Academy or Language Board” to coordinate the implementation of the language policy or language act at all tiers as well as initiate and propose policy reviews where and when necessary. For further considerations on the terms of reference of such a structure, see Chumbow 1987 and 2010c.

Thus, the implementation of language policy provisions is carried out at the macro-planning level by effecting at least any or all of the four processes of core Language planning processes outlined in Chumbow 2010a and 2011a which we summarise below.

4.1.1 Instrumentalisation

This is the process that leads to the conception, formulation, promulgation or adoption of legal or executive instruments that determine the status of languages of the nation and/ or prescribe language implementation measures for language policy. Such instruments as Laws, decrees, ministerial orders and decisions constitute a legal framework for corpus planning initiatives at any level. *Instrumentalisation* in a more general sense, applies to all the processes initiated to increase the efficiency and adequacy of a language, especially a language with a uniquely or essentially oral tradition, to enable it better cope with its new function of acquisition and dissemination of new knowledge in science and technology, or language medium of education, for instance.

4.1.2 Revitalisation

This refers to measures taken to restore endangered languages to a reasonable state of vitality and to counter the process of endangerment and de-vitalisation occasioned by the absence of the intergenerational transmission of language from parents to children, etc. (See UNESCO 2003a)

4.1.3 Revalorisation

This involves undertaking language planning measures that add value to the inherent value of the languages. Revalorisation processes may include *inter alia*.

- Standardisation of languages with as yet no written standard form, through a process of normalisation involving the provision of the language with norms of orthography, norms of grammar, etc
- Harmonisation of systems of orthography and writing for a group of related languages for which divergent systems were devised by various authors and different colonial administrations. This is frequently the case when cross border languages spread across two or more nations (with different colonial language legacies) are concerned (Chumbow1999).
- Design and production of language materials, such as primers, readers, grammars, textbooks novels, etc to enable the language assume its new function as language

of education, language of local or regional administration etc. in national development

- Etc.

4.1.4 Intellectualisation

A term coined by a group of African linguists in 2003 to refer to the processes involved in accelerating the use of African language in academic and intellectual discourse (especially in academic or university settings and in the society at large) by empowering the languages in various ways such as the development of appropriate terminology in the local language for the appropriation of the avalanche of new knowledge in science and technology available in an exoglossic or foreign language of the colonial legacy (English, French Portuguese, Spanish, etc). As observed in Chumbow 2011b, the importance of all the processes involved in *intellectualisation*, stems from the fact that 'limiting intellectual and development-relevant discourse to languages of the colonial heritage as is presently the case, marginalises the majority of the African population whose inadequate knowledge of these languages does not allow them to participate fully in the debates which concern their welfare'.

4.2 Micro - Planning level

Language Planning at the **Micro-Planning Level** (Mi PL) involves undertaking language policy implementation measures to solve identified language-related and language-dependent problems of the ethno-linguistic communities at the Private Realm. Local or Regional governments may take decisions to develop and use one or more languages. One expects that at the Mi-PL, a Language Planning Committee (LPC) is constituted for each language and supported by the Association of the elites of the linguistic Community and other organisations such as 'Descendant Unions', Civil Society Organisations (CSO) to assist the LPC with human and material resources needed to undertake at the private realm any language planning activity (revitalisation, revalorisation, instrumentalisation and intellectualisation) to make the language apt to assume new functions (in education, communication etc. assigned to it by policy or to improve on these functions where they exist.. The Mi PL may involve some *status planning* decisions compatible with provisions of the language policy or law but mainly deals with *corpus planning* activities to give effect to status planning decisions taken essentially at the Macro-planning level.

4.3 Maintaining the relation between the two realms

Since, in any multilingual and multicultural pluralistic state, dominance prevails as determined by a conjunction of vitality and status conferring variables of a social, economic and political nature, we submit that **Language Planning** (LP) has the duty and responsibility of mediating dominance, by way of a **redistribution** of the vitality conferring variables so that all the languages have at least the minimum required for their vitality and survival. The point being made here is that without intervention and a judicious mediation of the variables, we involuntarily (or voluntarily?) ordain the slow death of some of the languages ultimately. This is so because as indicated above, in any language contact situation, the *default process* is the law of the jungle or the survival of the fittest or dominant (and powerful) languages in the power-configuration and the concomitant

progressive weakening, attrition and /or loss of disempowered minority languages. Therefore to ensure the revitalisation and maintenance of the vitality of languages so as to enhance and maintain linguistic diversity and pluralism, it is proposed that Language Planning in a multilingual setting be governed by at least two principles: The Principle of Functional Complementarities (PFC) and the Principle of Attitude Engineering (PAE).

4.3.1 Principle of functional complementarities

The Principle of Functional **complementarities (PFC)** proposed and motivated in this section (see Chumbow2009 for an earlier version) pertains to the domains in which minority languages are used in relation to the domains of the majority or dominant language.

The principle of functional complementarities (PFC) requires that at the level of status planning (or policy formulation), all languages of the nation-state should be ascribed their inalienable identity function (the primary function) and be allocated some other *valorising functions* (education/literacy, media, public administration, parliament, business/commerce, etc.) necessary to ensure and assure the vitality and maintenance of the language and its contribution to the national development enterprise in the private and public realms.

Valorising Functions are those that procure economic, social and political advantages and thereby contribute to raising the status of the language.

The claim underlying this principle is that languages which are standardised and use in several domains and economic functions have a better chance of withstanding the vicissitudes, tornadoes and tsunamis of life than those which are not. They are therefore more resistant than languages with a tenuous existence and a limited or restricted functional load. The latter are more prone to undergoing language shift and extinction than those that are assigned a variety of functions in the enterprise of national development. This is in line with similar observations made by the *counter- endangerment* advocacy and scholarship summarised in UNESCO 2003a.

Evidence in favour of the complementarities of functions abound. Of the (about) 286 languages of Cameroon (Ethnologue 2009), about 100 are codified and are in varying degrees of formal usage. But only about a third (35) are used seriously in some form of education in the programmes of the National Association of Cameroon language Committees (NACALCO) and the activities of the Cameroon Association of Bible Translation and Literacy (CABTAL). and these prove to be more resilient in terms of vitality than the others whose use is essentially oral and limited to the home domain.

Recall that we have observed that commitment to linguistic diversity means acceptance of ethno-linguistic pluralism as a fundamental element in the paradigm of development. This requires the promotion of peaceful co-existence of ethno-linguistic groups of people in a pluralistic society where plurality does not entail replacement of one language by another but a recognition of the functional complementarities of all languages in a relation characterised not by mutual polarisation and enmity but by mutual cohesion and support.

What is the motivation of the principle of functional complementarities and what is it intended to achieve? The motivation is restated here as articulated in Chumbow 2009:

- Firstly, the PFC is congruent with the objectives of pluralism and the need to develop multilingual and multicultural societies where all ethno-linguistic identities are nurtured, preserved and harnessed for national development.
- Secondly, it seeks to empower minority languages which have generally been disempowered by being left with only the identity function to boast of, leading to a situation where users choose to go straight for the dominant language of power, which guarantees economic advantages and social amenities, leading to the abandonment, endangerment and consequent shift of the minority language. In South Africa, for instance, parents and pupils reject Mother tongue school facilities because the mother tongue in the bilingual education system does not lead to any valued functions and job opportunities, unlike English and it is therefore considered a waste of time (Stroud 2001, Alexander 2001, 2005, Nkonko 2003).
- Thirdly, commitment to the PFC requires that languages **share** some functions, and that their users be supportive of each other and see each other as **members of a team** whose goal is attainment of the ideal of **national development**. The principle of complementarities commits all linguistic communities to some sort of **vicarious responsibility** for their common endeavours for national development.
- Fourthly, **redistribution** and **sharing** of valorising functions officially by this principle re-enforces the vitality of all languages including minority languages and thereby guarantees their survival and stability

4.3.2 Domain penetration and the power of the PFC

In another context (Chumbow 2008), we have envisaged and stated the implementation of the PFC in terms of **domain penetration**. In this sense, to increase, sustain and maintain the vitality of minority languages, they have to be led out of the home domain to which they are often confined to penetrate into domains hitherto reserved for the official languages, and other dominant languages (including domains of education, the media, administration, commerce, parliament, etc). Thus, while endangerment involves a language losing some of its domains as a result of **domain encroachment**, domain penetration is a counter-endangerment process by which a minority language gains new domains of usage. The PFC therefore triggers a process of a deliberate planning and execution of domain penetration.

It is well known that the normal distribution of power between majority and minority languages is not dependent on the intrinsic value of the languages concerned but on historical accidents, of military, political or economic power. Thus, the balance of power in favour of dominant official languages (like English and French) in the African context, is due to the unfortunate circumstances of imperialism and economic dominance since the era of colonisation (Phillipson 1995). It may also be attributed to a conspiracy ignited by the forces of globalisation in collusion with the local (African) ruling class (Mazrui 1997) or by the survival instinct of the elite class struggling to protect its monopoly in the use of the foreign languages as a source of economic and political power that excludes the masses (Myers Scotton 1993). Similarly, social, economic, ethno-cultural and political factors of dominance explain the ascendancy of the other dominant African mega languages over

others. The PFC and Domain penetration and can redress the imbalance and its nefarious consequences of marginalisation and exclusion.

4.3.3 Principle of Attitude Engineering (PAE)

In the implementation of the PFC and other principles geared towards ensuring harmony in the development of the various ethno-linguistic communities in a pluralistic nation-state, the most formidable obstacle to the endeavour is the **negative attitude** of citizens towards the other language or towards their own language (in preference for a foreign official language). This point has been adequately articulated in the literature and underscored by UNESCO 2003a. The ultimate question is, what can be done about negative attitudes and their negative effects on the enterprise of pluralism? As already mentioned, negative attitudes towards one's own language or towards other languages in a multilingual setting is often determined by dominance variables, for instance, the hegemonic legacy, influence and dominance imposed by years of colonial and neo-colonial imperialism that make the language of the colonial legacy or heritage the language of education, administration etc. Governments and states may be guilty of negative attitudes towards some languages of the nation as evidenced by (official) language policies that systematically marginalise and exclude speakers of minority languages in favour of the 'official' or 'national' languages.

Negative attitudes heighten vulnerability when confronted by difficulties or pressure from another language (Gardner (1985)). In the case of negative attitudes towards one's own language, one is ready to give in at the least difficulty. Similarly, if the negative attitude is towards another language, one is predisposed to be aggressive with the slightest excuse. Those with a positive attitude, on the other hand, tend to resist pressure and invoke linguistic human rights and minority rights, (etc.) to get results in favour of their language, or any language perceived to be the object of victimisation. Negative attitudes constitute a stumbling block to the acceptance of the principle of functional complementarities or the accommodation of any principles and practice congruent with sharing of functions or penetration of new domains by minority languages. This constitutes a major obstacle to the enterprise of language revitalisation and the counter-endangerment processes.

To deal with this syndrome, we propose the principle (or process) of *attitude engineering* (PAE) Chumbow 2009

- By *attitude engineering* we mean the systematic use of sociolinguistic and psycholinguistic knowledge, principles and techniques to determine attitudes of government and the speakers of various languages in a language contact situation and the use of the findings as input for the design and implementation of a programme to effect polarisation of attitudes in the direction of a desired policy outcome.

What is the rationale for the principle of attitude engineering proposed here?

Attitude engineering involves taking appropriate measures to convert negative attitudes to positive attitudes. Positive attitudes actually underlie all of the UNESCO 2003a conditions for revitalisation of endangered languages and maintenance of linguistic vitality of all languages to ensure diversity as illustrated below

- A positive attitude leads to a better predisposition to resistance of pressure. The ability for a minority language to resist domination pressure and adopt mechanisms to

appropriate and consolidate the use of existing domains and **penetrate** new domains and acquire valorising functions etc, as proposed above, depends on the positive **attitude** of its users. A corollary of this is that a population with negative attitudes *ipso facto* lacks the motivation to act in favour of the maintenance of their language).

- A positive attitude (resulting from the application of the PAE) and dynamism in favour of the maintenance of the language will motivate and guarantee *intergenerational transmission* of the language to children and ensure that the linguistic community maximises the UNESCO (2003a) criteria conditions of 'absolute numbers of speakers' and 'the proportion of speakers of the language within the population'.
- The positive attitude and socio-economic dynamism of speakers of a language often contribute to the increase of the number of people involved in the *acquisition of that language as a second language by others outside the linguistic community*, thus contributing to the vehicularity of their language.
- With positive attitudes, speakers can constitute Language Planning Committees and mobilise the elites of the linguistic community to lobby for government and institutional support, ensure the *production of language and literacy materials* and *undertake relevant documentation* for the language.
- With positive results from positive attitudes, members of a linguistic community can fortify and re-dynamise their own attitudes, leading to increased positive actions and concrete achievements in the maintenance of the language's vitality. Put differently, the process of mutual re-enforcement between positive attitude, positive action and positive results produces a multiplier effect which maximizes and optimises opportunities for language use.

As mentioned above, even governments may also have an attitude problem. Another dimension of the PAE is to verify not only the attitude of linguistic minorities and the linguistic majorities but also **government's attitude** so as to usher in macro-level language policy changes and policy implementation actions in favour of linguistic minorities. A relevant question in this respect (among others) is whether there is a policy instrument in favour of the development and use of minority languages in key domains which linguistic communities can use as warrants for their micro-level language planning initiatives and as a basis for countering resistance from dominant groups. Relevant data for attitude engineering in language planning therefore crucially involves information on (a) the attitude of speakers of a language towards their own language (b) the attitude of speakers of other languages towards that language and (c) the attitude of government towards majority (or dominant) and minority (or less dominant) languages

A fourth dimension is that **attitude engineering** as a macro level (psycho-social technological) activity is intended to bring about the often vaunted but very elusive '**change of the mindset**'. 'Mindset change' for an entire population is often presented as a desired social and economic necessity in the African context. It is a dilemma of contradictions that Africa and its people are endowed with natural resources of considerable variety, quantity and quality but remains eternally poor. Scholars who examine this and similar issues have come to the conclusion that what Africans need is a '**change of mindset**'. Ngungi Wa Thiongo 1995 attributes the negative attitudes of Africans to education in the mother tongue in favour of English to the **colonial mentality** which sees English, 'the language of imperialism' as the only medium for intellectual and academic discourse. Alexander 2001

laments this state of affairs in the following term: “How can we transform the climate of opinion so that we can shift the colonial minds from the groundless belief that only knowledge which is packaged in the languages of the colonial conquerors is worthwhile knowledge?”

Adedavoh Delanyo 2007 discussing the need for transformation in Africa to usher in the much vaunted take-off for development, states emphatically and with conviction, ‘new leadership in Africa requires leaders with new mindsets’

Observations on the need for a **change of mindset** in Africa and elsewhere characterise much of the discourse of social sciences research. It is therefore apparent that the concept of **change of mindset** putatively has some validity. However, it is not clear at the moment what **mindset change** means or what it entails. It is as yet only a *construct* that must be operationalised. There is a need for theory of mindset change.

It is however, self evident that a **change of attitude** is a possible indicator of a mindset change in that the change of mindset inevitable has to go through or result in **attitude change** (resulting from attitude engineering). Ultimately, attitude engineering principles can be generalised to take care of such intractable issues as change of attitudes with respect to HIV/AIDS campaigns, etc. The concept and process of **Attitude Engineering** sketched above has the potential of satisfying the need for a model that can organise a structured set of actions and activities that will result in **mindset shift** manifested in attitude change and behaviour change in any area where attitudes are relevant and important. A discussion of these issues is beyond the scope of this paper. For the interested reader these issues are sketched in Chumbow (2008a and in Chumbow 2012 where attitude engineering is seen as part of a general model of a process of social engineering that starts with awareness of an innovation (a new mentality) and goes through phases of comprehension, knowledge, judgement, change of attitude and change of behaviour as indicators of appropriation of the new ideas, new knowledge or new mindset. Thus, attitudinal and behavioural evidence of the appropriation of a new mindset in the place of an old mindset would be *prima facie* evidence of a **change of mindset**.

5. Case studies using tier stratification model of planning

This section presents case studies by way of a cursory illustration of the application of the tier stratification model of language planning. To do so we outline, by way of a summary, essential requirements of the model at the policy formulation or status planning level.

5.1 Key requirements for the application of the model

The application of the Tiers stratification model of language planning has to take into consideration Macro-Level planning information for Language planning in the public sphere (which constitute essential elements of language policy).

1. **Official (National)Language(s) in the Language Policy (OL-LAP)** What languages are (can be or should be) prescribed as ‘official languages’ of the nation in the National language Policy? Where a language policy exists, the policy provisions have to be applied in the model; if not, language planning endeavours can provide or prescribe Official or National language(s)
2. **Number of Administrative Tiers (N A T).** How many (major) administrative units are there in the nation (from the Local government to provincial or state levels)?

3. Language of Administration for the Administrative tiers envisaged in the language Policy (LAT-LAP). Are there any languages envisaged for use in official transactions and interactions at some levels or tiers of administrative units (other than the official/national language in (1) above? It must be emphasized that it is neither necessary nor desirable that different languages be designated for different administrative tiers. In fact, for practical reasons of not overloading the individuals in the nation-state, it is desirable that several tiers be associated with one language.
4. Language in Education Policy (LiEP). The ideal language-in education policy for multilingual and pluralistic states is one proposed by UNESCO (2003b) and other international organisations such as the Council of Europe, the African Union (AU2006b), the Bamako International Symposium on Multilingualism, etc. It has been developed as the **'Mother Tongue- based Multilingual Education (MT-MLE) policy** which recognises that all education should, as far as possible, be carried out in the Mother tongue as far up the ladder of education as possible along with one or more languages designated to play some function at different administrative units (council, regions or state, etc.) of the nation. (See Heugh 2006 among others). Thus, the MT-MLE is actually a Mother tongue -based bilingual or multilingual education. This is envisaged and summarised in Chumbow 2010b as *Mother tongue plus a constellation of language as determined by the state's policy*. The logical language combination possibilities of MT-MLE are presented in (a) - (d) below with MT (Mother tongue as an obligatory constant).
 - a. MT+ OL: (MT+ one language constellation where the one language is the official language.
 - b. MT+ L₂, OL: (A two languages constellation where the official is used with one language slated to be used at one or more administrative levels.
 - c. MT+ L₂, L₃, OL: A three Languages constellation consisting of the official (or national) language and two other languages used at one or more lower level tiers or
 - d. MT+ L₂, OL₁, O L₂ : The three languages constellation may be from one lower tier language and two official languages.
 - e. MT+ L₂, L₃ ...L_n +OL . Where L_n refers to any number of languages along with the Mother tongue and the official or national language.
5. **Constraint on the number of Languages to be prescribed for Learning.** Although theoretically, there is no upper limit to the number of languages an individual can learn or acquire, there are practical methodological problems with teaching too many languages as research on the identification and implementation MT-MLE shows. It is therefore necessary to limit the combination of languages in the MT-MLE to a four language learning situation; that is, a three language constellation (MT+L₁, L₂+OL). Thus with this constraint, we expect to have (a) MT-based bilingual education, (b) MT-based trilingual education and (c) MT-based quadrilingual education. This in effect means that the logical possible combination of languages reflected in (e) above is ruled out as a possible LiEP (even though individuals may on their own acquire and use more than four languages).
6. **Assignment of economically valorising functions** to ethno-linguistic community languages of the private realm by the application of the Principle of Functional Complementarities (PFC)
7. **Sensitisation of Populations on issues of language and development**, pluralism and the virtues of multilingualism and multiculturalism. This includes *inter alia* application of the Principle of Attitude engineering (PAE).

5.2 The tier stratification model applied to Tanzania

Tanzania is famous for having developed and instrumentalised the use of Kiswahili as a national language alongside English, the language of the colonial legacy, to the extent that for many, Kiswahili is the only known African language of the country. However, there are about 120 ethnic community languages in Tanzania (besides Kiswahili and English) A Tier stratification language planning for Tanzania could /would be as follow:

5.2.1 Official or National Language in the Tanzanian Language Policy

The existing language policy position holds that Kiswahili is the national Language and used as an official language of administration at all strata and administrative tiers from the Local Government and above with English considered an official language sharing domains with Kiswahili. (The policy does not assign much of any significant functional role to the ethnic community languages).

5.2.2 Number of administrative Tiers

This is not important in that Kiswahili is envisaged to be used in all administrative tiers with English. However, a revision of the policy can be envisaged to enable some of the local languages of wider communication such as Sukuma, Gogo, Haya, Nyakyusa, Makonde etc. to be assigned functions at the regional levels (along with Kiswahili and English). Also, some cross border languages with a more significant population of speakers across the border such as Luo (Kenyan Border), Haya,(Burundi), Makhua (Mozambique) etc. can be developed by a Transborder language Planning Committee (Chumbow 1999) for use in both or all countries for various functions including (at least) the function of education (as part of the language -in -Education policy).

5.2.3 Language of Administration in the various Tiers in the Language Policy(LAT-LAP)

The public realm (in current Tanzanian policy) is conceptualised to use only one (African) national language (Kiswahili) for all the administrative units of the public realm and in all the functions and domains along with English, a **partner language**, i.e. a foreign language serving as official language and language of international discourse or language of globalisation.

However, the modifications suggested in 4.2. 2 above can assign the function of language of administration to some languages of wider communication in some regions of the nation (eg. Sukuma, etc.) along with the national and official languages (Kiswahili and English).

Given the facts in section 4.2 (4.2.1-3) above, the diagram (fig.2 above) captures the facts, representing the national level and the national-official language (Kiswahili) stretching across the entire public realm and used at all levels of administrative units from T_1 to T_n ... Note that the official language, English parallels the national language in all functions and in this model is therefore considered a one language stratification even though two languages are involved. Indeed no stratification is involved in the use of the two languages.

The tier stratification model applied to Tanzania

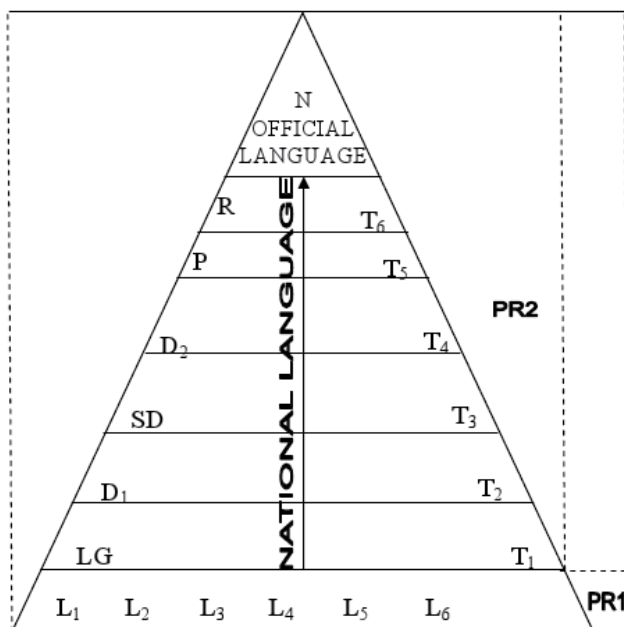


Fig. 2. One Language Stratification

5.2.4 Language in education policy

Contrary to the observed neglect of Ethnic Community Languages (ECLs) in Tanzania (Mkude (2001, Batibo 2005), the Tier stratification model places all these languages (L_1 Asu, L_2 Bena, L_3 Kivungu, L_4 Nyamwezi, L_5 Haya, L_6 , Makonde L_7 Sukuma, ... L_n) in the private ream and micro level planning activities have the responsibility of taking appropriate measures to revitalise, revalorise, instrumentalise and intellectualise all them for use in education in the application of the MT- MLE language -in-Education policy discussed above. This leads us to language in education policy (LiEP) that favours the development and use of the about 120 ethnic community language presently neglected. We have thus envisage a trilingual education situation of MT+ L_2 (Kiswahili)+ OL(English). (A quadrilingual education situation is possible where some languages (Sukuma, Makonde, etc. are recognised as administrative languages at the Regional level).

5.2.5 Constraint on number of languages in education

The constraint in the number of languages involved in the school system is respected with generally a two language constellation (MT+NL+OL) and exceptionally, in some regions ,a three language constellation is possible.

5.2.6 Assignment of valorising functions

Beyond the identity function the ECLs are assigned at least two functions: language Medium of education and language of administration at the District/Local government

level. This can be extended to other valorising functions by national policy. However the use of these language in education and administration at one tier reinforces the language's vitality considerably beyond the intrinsic identity function.

5.2.7 Sensitization of the national community

Sensitization of the national Community on the role of language in nation building and language and pluralism, especial with all stake holders including not only speakers of majority and minority languages but also the government which needs to reverse its negative attitudes to ECLs which are currently neglected in favour of Kiswahili. (See for instance Batibo1992, 2005 and Mkude 2001, Rubanza 2002).

5.3 Tiers stratification in a situation of two or more national languages

In this variant the nation or public sphere conceives two or more (but a limited number of national languages) to be used in the public realm in prescribed zones or regions of the country. Figure 3 below represents this variant.

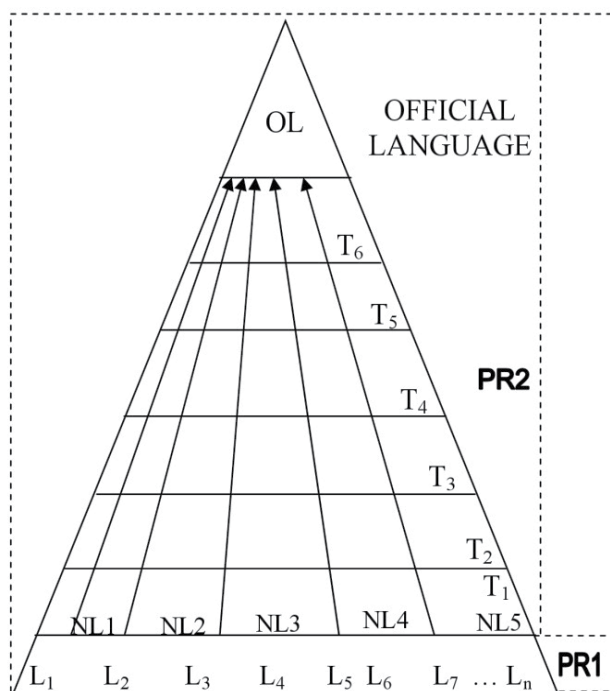


Fig. 3. Five languages stratification

On the basis of the type of analyses carried out in section 4.2 for Tanzania, Nigeria is a good candidate for such a stratification, where Hausa, Yoruba, Igbo and Fulfulde spoken by over fifteen million people each, can safely be declared the language of education and governance of the public realm in several states along with English, the official language, while each of the about 450 languages are used at the level of the private realm. Each state can then evolve a LiEP on the MT-MLE pattern using a convenient and relevant

constellation of languages duly constrained. The practical challenges of human and material resources in the implementation of language policy are not discussed here.

These are the subject and object of discussions in the literature. See, for instance, Chumbow 1987, 2005 and Bamgbose 1991 among others.

6. Conclusion

This paper sought to elucidate the problematic of language planning for national development in a multilingual setting. This is anchored on an ideological paradigm that attaches premium to linguistic diversity and pluralism as the basis for nationalism, nationhood and national development in consonance with UNESCO's 2003ab position. A study of the facts of multilingualism and multiculturalism provides the background for a framework for *language planning* in the **public sphere**. The *Tier Stratification Model* provides for the **private realm** where all languages of ethno-linguistic communities are catered for at the micro planning level and the **public realm** where the language needs of administrative units of the nation within the public domain are managed at the macro-planning level. The model further seeks to capture the dialectic and dynamic relation that exists or should exist between the languages at the private and public realms. Given the potential problem of dominance and tension in situations of language contact and the need for a harmonic relationship of symbiosis in a pluralistic state, the **Principles of Functional Complementarities** and **Attitude Engineering** are proposed, motivated and rationalised as relevant factors in the mediation of the relation between languages of the private and public realms, in an ideal language planning model that seeks to enhance national identity while maintaining pluralism and ethno-linguistic diversity by countering endangerment and enhancing revitalisation of vulnerable and threatened minority languages.

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Creative Expression Through Contemporary Musical Language

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1. Introduction

“Sonic idylls are an illusion, a child’s dream. Decisions follow, which in life are often not our own, but which shape our lives... they play dice with us. There arises a confrontation with reality, which is normally not as we would wish...conflict. The unavoidable result is synthesis – a reconciliation, the modification of reality as it is, which is a good reason for optimism. The elements of the sonic idyll no longer belong to dreams, but to the equilibrium of awareness, thus to comprehension. “wrote composer Rojko (2009, p.18) in the commentary to his composition with the title “Dice song “.

In our lives, we are constantly faced with numerous challenges which require making decisions and choosing among several possibilities. “Facing the reality“ presupposes creative solutions which are conditional on the context - environment, personality traits, cultural and other factors, which theories (among them also pedagogical, psychological, sociological, anthropological, phenomenological and ethnological) shed light upon from different points of view.

According to Elliott (1995, p. 229) we understand the complex dimension of creating as “a desire to search out gaps in what is already known, to advance the way things are done in a practice, or to go beyond what is already understood or accepted.“ In this sense musical creativity refers “to achievements of musical composing, improvising, and arranging that are original and significant within the context of a particular musical practice, including instances of musicing that depart in highly original and important ways from existing traditions.“ (ibid., p. 219). The author's concept of musical creativity is based on a systemic model in which he emphasizes the interaction between an individual and the socio-historical environment which, at the level of music and the existing cultural context, conditions different modes and ways of creating. He points out that creating is never a consequence of an individual's endeavour alone, but is always connected “to a network of direct and indirect musical, social, and cultural achievements and relationships.“ (ibid., p. 217). Musical creativity is heterogeneous and in different contexts its elements influence each other in different ways.

Among various factors shedding light on musical creativity, according to Burnard (2007), the most important are the answers to the question how to realise it. The author says:

“Considerably more research is needed to establish not whether development in musical creativity is produced by personal, social or cultural forces, but how.” (ibid., p. 1209, 1210).

The question HOW is of utmost importance when it comes to encouraging creativity, particularly within the pedagogic context. Therefore, the following pages present the results of a research which focused on a creative workshop of contemporary music which provide some possible answers. But before that, we must ask ourselves WHY. In the language of the arts the first answer might lie in the competence of culture awareness and expression. As one of the eight key competences, it gives creative expression, perception and experiencing of artistic languages a central place. The competence of culture awareness and expression includes critical thinking, creativeness, self-initiative, problem solving, risk assessment, taking decisions and constructive control of feelings. In the Recommendation of the European Parliament and of the Council on key competences for lifelong learning it is defined as “appreciation of the importance of the creative expression of ideas, experiences and emotion in a range of media, including music, performing arts, literature, and visual arts.” (Recommendation of the European Parliament and of the Council, 2006, p. 18).

Music has a special place in this context, since, as a basic communication language, “it provides a means by which people can share emotions, intentions and means even though their spoken languages may be mutually incomprehensible.” (Hargreaves et al., 2009, p.1).

2. Research

In the research we were interested in how creative expression through contemporary musical language can contribute to the development of lifelong competence of culture awareness and expression. In accordance with the research objective, we posed the following two research questions in the case study:

- Which advantages can we identify in the creative expression through contemporary musical language?
- How can creative musical expression contribute to the development of the competence of culture awareness and expression?

2.1 Research method

In researching the case study we used the descriptive method of pedagogical research.

The research sample included students of music schools (altogether 46 students, aged 5 to 19), 14 music-school mentors/teachers, 22 students from three University of Ljubljana's faculties (Academy of music – Department of Composition; Faculty of Arts – Department of Musicology; Faculty of Education – Department of Primary Education) and 50 pupils from two classes of a primary school from Ljubljana (8 years old) who participated in the contemporary music workshop. The project, which was carried out between January and March 2009, was organised by the Ljubljana Festival and led by composer Uroš Rojko. The concluding presentation of the project was held in the Knights' hall in Križanke, Ljubljana, on 12 March 2009, as part of the 24th Slovenian Musical Days. Participants of different ages and musical knowledge took part in a creative process of formation and performance of contemporary musical works. In the three-month period they independently, as well as with mentors' and the composer's support, explored the sounds of their instruments,

contemporary musical notations and possibilities of interpretations of contemporary scores, and learned about the parameters of contemporary musical language through individual and group improvisation. Thus they liberated themselves of the constraints of the traditional musical performance.

To collect data, we used a semi-structured interview. The interviews were carried out from April to June 2009 with the participating composer, a representative of the cultural institution The Ljubljana Festival, 4 music school pupils, 3 mentors from two music schools, 7 students from the three participating faculties, and a parent of one of the participating pupils. The interviews, which lasted from 30 to 60 minutes, were recorded and transcribed for a subsequent analysis in which we used the parts of the text relevant in terms of the research objectives. The text was marked with a system of codes which were later combined into categories devised on the basis of criteria related to indicators for the development of lifelong competence of cultural awareness and expression, including factors of creative expression in connection with the social and personal competences.

2.2 Research results and Interpretation

Based on the research questions and with the help of the semi-structured interview we obtained opinions of the participants who were mainly directed by the following open-type questions:

- How did you experience the workshop?
- What advantages did you notice in the process of creative musical expression?

Below, we present the interviewees' answers according to categories of indicators for the development of the lifelong competence of cultural awareness and expression, particularly the creativeness factors in connection with the social and personal competences, which are also important transfer factors of all eight key competences (Recommendation of the European Parliament and of the Council, 2006).

2.2.1 Experiencing musical workshop and its advantages in connection with social competence factors

The social context of creating refers to the elements of the environment in which an individual internalises musical tradition, taste, values, special preferences, etc. of a reference group (predecessors, contemporaries, audience, critics, friends, etc.). So, creative achievements are not consequence of individual endeavours only, but also of a dialectic relationship between an individual and the social factors (Barrett, 2005; Burnard, 2007; Elliott, 1995; Sawyer, 1999). Sawyer (1997) defines the social dimensions of creating as "collaborative emergence", Elliott (1995) with a systemic model in interaction between an individual, area and domain, Wiggins (2002, as cited in Burnard, 2007) as "creative context" which includes interaction of an individual's activity with social and musical dimensions, and Glover (2000, as cited in Burnard, 2007) as "parallel composing" when an individual and a group act mutually.

In the creative workshop, participants created on their own but at the same time they received feedback, support and assistance of the group. In active and creative learning processes, through various learning strategies and continuous feedback, they exchanged

opinions, views and feelings. The feedback they received provided them with immediate information about their work and guidelines on how to continue. The formative function of feedback co-created musical competence of the participants (Pintrick & Schunk, 1996) and helped overcome the initial insecurity and fears in relation to expert and creative challenges, particularly with the primary education students.

“We shared opinions about what is good, what could be removed or added and we were quite unanimous about what was good and what was not. The constant composer’s feedback was of great help. /.../ At first, there was some fear present – what if we do not really belong here. But after we received positive feedback and felt that we have become part of the composition, it got better and better. /.../ Even if you felt insecure, after you received positive feedback you had got courage and then it was easier to get involved in the process.” (students of the Faculty of Education)

Elliott (1995) talks about “reflection in action”, about which he explains: “monitoring the effectiveness of our musical thinking-in-action in the present movement - is a nonverbal form of critical thinking.” (ibid., p. 62). He emphasizes non-verbal expression of reflective thinking, i.e. through parameters of musical languages and distinguishes it from “reflection on action” which is about verbal expression (and interpretation) of musical thinking. “Reflection in action” presupposes the use of musical language in the process of musical communication, as the only possible way to direct musical thinking and creative expression.

The participants of the workshop were discovering the particularities and advantages of communication through musical language. They used musical communication to exchange opinions, accept new ideas and different solutions and they experienced satisfaction about the learning process itself. Learning focused on participants’ personal objectives, motivation and feelings, which are important components of self-regulated learning (Boekaerts, 1999).

“You had to be aware of the entire room, every individual and their instruments. You could feel we were communicating on musical level. /.../ It was interesting, because our cooperation took place not so much on verbal, but more on musical level.” (students of the Faculty of Education)

The participants experienced optimum learning situations and an encouraging learning environment which stimulated creative expression (Burnard, 2007). In the social learning context (Brophy, 1999) the participants experienced the process of musical creating as a value, which stimulated their further learning growth (Harkema et al., 2008).

2.2.2 Experiencing musical workshop and its advantages in connection with personal competence factors

Afore mentioned social competence factors helped the participants to develop their personal notion of the sense of learning and to shape their own musical expression. They expressed their identity with music, thus communicating not only “who they want to be” but also “who they are” (Cook, 1998, as cited in Hargreaves et al., 2009). They used musical communication to express their personal identity, what Hargreaves et al. (ibid.) call “music in identities”.

“When you play, it is an expression of your personality. With music you communicate your life and way of thinking. Actually, it is an invisible connection. /.../ Every music carries a

message, it has something, a soul. /.../ Now I know how to look into myself. /.../ I became more outgoing and at the same time I learned how to communicate with myself. /.../ I started to contribute to the composition with more and more confidence. " (music school students and students of the Faculty of Education)

"The composition Name Piece is an example of searching one's own identity and it answers the question what do I do in this World. Each participant had to say his/her name in their own way, i.e. in a way no one else can. " (representative of the cultural institution)

The performers were also autonomous in searching their own musical expressions or musical identities, what the previously mentioned authors (ibid.) call "identities in music". In a complex interaction between cognitive, emotional and social reaction to music, the participants developed a feeling of personal and musical identity. In the composition by John Cage "Name piece" they could, as performers and co-creators of the composition, improvise and use their own names in the most various and creative ways possible. They only had to follow the composer's instructions about the use of five musical actions: long - loud, long - quiet, short - loud and short - quiet tone. They could use letters from their names which were at the same time names of the tones, they could imitate the pronunciation or the spelling of the name, thus interpreting their personality and identity with music. They explored and learned about parameters of contemporary musical language and enhanced their interest in and positive attitude towards contemporary music.

"Certain actions were given and we had to use them during the activity. You had to consider when to use one and how it would fit into the context that was going on around you. Or do something completely different, but you had to know why. And no one told you when or how to do it. " (student of Department of Musicology)

"When you explore yourself and work with your feelings, you are also more open to contemporary music. /.../ The point is, that you have to understand this language and when you do, you start to like it. /.../ With contemporary music it is not about whether you like it or not. You have to open up to it. /.../ When we repeated the whole thing several times, certain patterns started showing, and if they were good, we tried to incorporate them into the composition. /.../ Sometimes you noticed that something you had done did not belong there, so you changed it next time. " (music school students and students of the Faculty of Education)

Creative expression using contemporary musical language offered the participants much "open space" to develop, based on learning from mistakes, constructive control of feelings, taking initiatives and decisions, providing feedback and cooperative problem solving, which are all important components of the lifelong competence sense of initiative and entrepreneurship (Bresler, 2010). This competence refers to an individual's ability to turn ideas into action. It includes creativity, innovation and risk-taking, as well as the ability to plan (Recommendation of the European Parliament and of the Council, 2006).

Bresler (2010, p. 14) talks about "transformative practice zones" which are "spaces as well as a way of interacting and thinking, where the participants are touched and often transformed in the process" and which "provide spaces to share and listen to others' ideas, visions and commitments, and to build relationship in collaboration across disciplines and institutions."

3. Conclusion

The results of the research showed a complex presence of various factors of personal and social competences which determine the nature of creating (also) in contemporary musical language and indirectly influence the development of cultural awareness and expression as well as other life-long competences.

In creative musical expression, the participants

- developed sensitivity and positive attitude towards contemporary music;
- explored the parameters of contemporary musical language;
- developed a sense of community and of personal identity;
- interacted with each other and worked in a group which offered support to the activity of each individual, representing safe environment;
- shared feelings, viewpoints, opinions and experience;
- reflected on their own and the group's creative work by providing feedback;
- took initiatives and solved problems;
- developed self-confidence and took on creative challenges;
- self-regulated learning by planning, observing and reflecting upon their own work;
- were aware of the importance of the creative process itself, not just its results;
- they broadened their horizons and acquired new knowledge from the flow of artistic and pedagogical practices;
- developed tolerance and respect of different ideas and views;
- showed interest in communicating in contemporary musical language;
- were autonomous in the search of their own musical expression and musical interpretation of their personality and identity;
- developed mutual trust and understanding on the basis of cooperation between the educational and cultural institutions and the artist.

A creative process (including the one involving contemporary music language) is a value in itself, with an intrinsic worth. The process of creating, in which an individual develops their self-image, self-awareness, self-esteem and aesthetic sensitivity, is just as important as its results. In co-operative way of working individuals reflect upon their own creative practice and share ideas, feelings, experience and feedback with their "critical friends". This shows the importance of environmental factors for the creative process. The socio-cultural dimensions of creating require "that we acknowledge the complexity of these dimensions and the diversity of ways in which children participate in musical communities of practice within and without the school setting." (Barrett, 2005, p. 191).

We have also identified challenges which indicates the direction of future answers to the question HOW to encourage and achieve musical creativity. The challenges lie in lack of teaching experience in contemporary music, insufficient inclusion of contemporary music in school curricula and insufficient professional competence of music teachers in this area.

"When you return to music school you are totally shocked, because you have to play in tempo again and so on, while there you could be different. I think that we should play such compositions in music school as well, at least a little bit. /.../ It would be very useful for all professional musicians (there were very few present there) to step out of the traditional way of playing." (music school students and student of Department of Musicology)

“I would suggest to the composer to organize a seminar for teachers where we could learn these elements, so that we could be the moderators of such work at music schools.” (music school teacher)

We also identified the need for broader and better quality cooperation and partnerships between educational and cultural institutions and artists, which, according to the findings of other researches (Bamford, 2009), calls for implementation of the already existing national and international strategies of culture and art education. The interviewees pointed out a number of advantages brought about by cooperation among them, as well as by sharing and comparing expert opinions about education and art, applicability of knowledge, education of the audience, etc. They also emphasized the importance of suitable working conditions and financial support.

“All cultural institutions should be aware of the fact that they educate the audience, guiding them on their way of choosing concerts. They have the logistic means to carry out projects which schools can not. This should be part of their missions. Slovenian institutions are not yet aware of that. Also at the level of both competent ministries, there is a lack of connections and financial support for such projects.” (representative of the cultural institution)

“It is very important that we are not isolated in our own environments. Our contacts and exchanges are of great value. It is particularly valuable when it comes to disregarded segments of music.” (music school principal)

To sum up, the research shows that different modes of musical expression and creating involve complex reaction of an individual at the levels of knowledge, viewpoints, identities (Barrett, 2007) as well as socio-cultural environment. Based on our findings, we suggest that creative expression (especially through contemporary musical language) should be given its proper place and a broader support by the environment in terms of educational and cultural programmes as well as the performing practice, since these are the systemic social factors influencing the role and meaning of contemporary musical creativeness. Lorin Maazel (2009) said that art which is not personal and does not carry a human intimate stamp is not art at all. This thought sums up beautifully the importance and sense of art for an individual.

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Section 7

Public Knowledge: Transference and Dissemination

International Higher Education Rankings at a Glance: How to Valorise the Research in Social Sciences and Humanities?

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1. Introduction

As part of the international comparison of higher education, the last decade witnessed an explosion of rankings of higher education institutions (hereinafter HEIs) at both national and international level. Consequently, in almost all countries HEIs are compared in national rankings compiled by both the public and private sector; worldwide, furthermore, so-called global university rankings have been elaborated and most countries are concerned about their implications. This process is relentless, and despite being sharply criticised, such rankings or league tables are increasingly being used to compare HEIs. Their use is partly responsible for increased competition among universities at national level and, more importantly, among the most prestigious institutions at international level.

The international university rankings attempt “simplistically” to assess the “quality of higher education”, a concept which is far from clear, particularly as an abstract term, and often misunderstood as to what it measures. Quality is not one-dimensional, but rather multidimensional: the quality of teaching, the quality of research, quality as a combination of activities (teaching and learning, research, development and innovation), quality as an institutional mission, etc. As a result of this multidimensionality there is no consensus on what constitutes “quality” or “excellence” in higher education. Furthermore, quality is not homogeneous within each HEI, as its schools, departments or programs vary. In general, although the majority of the more established rankings attempt to measure precisely academic and scientific quality in both teaching and research, experience has shown that the most popular global rankings (i.e. the rankings of world-class universities) in fact reflect many factors related to institutional reputation and prestige, and there is an acknowledged lack of an appropriate battery of performance indicators at international level to comprehensively measure the total quality of HEIs and to consider all the fields of knowledge in which they work. So far, the critical element is the management of knowledge and how to generate “good” rankings. The theory behind of rankings seems clear, it has a substantive meaning but it is not trouble-free the construction of indicators for all the areas (European University Association, 2011).

We examine the major global rankings (the ARWU, the QS World University rankings and the new THES World University Rankings) and other international rankings specialized in

assessing research undertaken by HEIs (HEEACT, CWTS-Leiden and SIR). None of these lists provide a complete picture of the sector, especially for social sciences and humanities, but there is no doubt that research world-class is inherently international. Most of these international rankings confer great importance to research activities or focus their assessments only on this issue, as shown the proliferation of rankings about research only.

The aim of this chapter is two-fold. First, we discuss the advantages and disadvantages of the international university rankings, pointing out the deficiencies in the treatment of social sciences and humanities research which virtually disable the concept of an “ideal” ranking of higher education institutions. Second, we review the current literature which attempts to bridge the gap between Sciences (Natural Sciences, Life Sciences, Medicine and Pharmacy) and Social Sciences and Humanities. This challenge cannot be sidestepped, especially when ranking providers are classifying and comparing institutions engaged in different activities such as teaching, research and the transfer of knowledge and involved in different fields of research and in different teaching programs in the context of the internationalisation of higher education.

2. Some features of international rankings of Higher Education Institutions

The increasing globalisation of higher education has resulted in an explosion in the global rankings of HEIs. Great interest has been shown all over the world in the state of the question, and there exist an increasing number of empirical studies proposing classifications of them. This section offers, firstly, a synthetic review of global university rankings from differing approaches; secondly, the most important league tables which have classified HEIs attending only research are reviewed and focusing the treatment and problems in social sciences and humanities; and finally, discussing the main advantages and disadvantages of these rankings as a whole.

2.1 Global university rankings

Rankings of HEIs have become established in the age of globalisation as a result of the internationalisation of higher education, which has led to increasingly global competition and a proliferation of so-called worldwide rankings, also known as ARWU (Academic Rankings of World Universities), after the name of the first such ranking, published in 2003. Therefore, the university ranking phenomenon is a very current phenomenon. We now describe the main characteristics (performance indicators, admissions criteria, etc.) of three most widely known internationally global HEI rankings. The first, developed now by the Shanghai Ranking Consultancy and the Institute of Higher Education of the Shanghai Jiao Tong University, is the Shanghai Academic Ranking of World Universities (or ARWU). The second and third, published by The Times Higher Education World University Ranking, in cooperation with Quacquarelli Symonds until 2009 and together with Thomson Reuters since 2010. Both of them rank universities on the basis of various criteria, such as prestige, peer review, awards received and research, among others.

All the above rankings analyse a considerable number of HEIs but usually present only those universities in the leading positions (Top-100, Top-200 or following top hundreds until Top-500). Some divide their lists by world regions or fields of knowledge. These kind of global rankings attempt to link research indicators to other issues related to teaching,

university reputation or size. Finally, all of them use a relative small number of indicators (based in the acquisition and publication of “reliable data” on university webs, HEIs leaders, governmental agencies, etc.) and assign weights (if any) arbitrarily to each of them.

ARWU is the most widely known internationally ranking, yet also one of the most controversial. Its original intention was to rank world-class universities and, eventually, to begin benchmarking top Chinese universities using internationally comparable third party data available to all to check (Liu, 2009). Its ultimate objective was to measure scientific productivity and the project was performed by solely the academic interests of the University of Shanghai, to analyse its position in a worldwide classification of universities and to improve its strategic planning.

The ARWU was born as a “generalist” ranking, including factors related to research, teaching and the reputation and size of HEIs. It lists the top 500 institutions worldwide, on the basis of four criteria: the quality of education (the number of alumni who have earned a Nobel Prize or have been awarded a Fields Medal); the quality of Faculty (the number of researchers who have earned a Nobel Prize in physics, chemistry, medicine or economics and/or a Fields medal in mathematics, and the number of highly cited researchers in the fields established by the Web of Knowledge or WoK); research output (the number of articles published in the journals Nature and Science; and the number of publications in the Science Citation Index (SCI) and Social Science Citation Index (SSCI) of the Web of Science or WoS), weighted by the size of the institution (academic performance of institution in relation to the number of full-time equivalent academic staff). The ISI WoK includes a multitude of databases, among which are the Journal Citation Report, the Derwent Innovation Index, the Essential Science Indicator, the ISIHighlyCited.com or the WoS, which in turn includes, among others, the SCI, the SSCI and the Arts & Humanities Citation Index (A&HCI).

Since 2007 this has listed the top 100 universities, in five main fields: Natural Sciences and Mathematics, Engineering and Information Technology, Life Sciences and Agriculture, Medicine and Pharmacy, and Social Sciences. Since 2009 it has also provided information regarding the top 100 universities in more specific areas: Mathematics, Physics, Pharmacy, Computer Science and Economics. Arts and Humanities are not ranked because of the technical difficulties in finding internationally comparable indicators with reliable data. Psychology and other cross-disciplinary fields are not included in the ranking because of their interdisciplinary characteristics (Liu, 2009).

The criteria of this ranking can be grouped alternatively, as in Table 1, which shows more clearly that research activity is the basis of almost all the indicators used, using the number of Nobel Prize winners and Fields Medal winners to evaluate not only research but also teaching.

Despite being strongly criticised, the popularity of the ARWU ranking has steadily increased. One important criticism concerns its bias towards large universities and, above all, towards research-based universities. Although the ranking corrects for institutional size (per capita academic performance of institution), this factor only accounts for 10% of the total ranking, while other indicators are expressed in absolute terms and, therefore, benefit the larger HEIs. In turn, the bias in favour of research means ARWU is a “partial” ranking and, more worryingly, ignores teaching activities. Such activities are perhaps those most appreciated

Criteria		ARWU		QS		THE	
N° HEIs RANKING		500		700		400	
RESEARCH	Research output	Nature & Science	20%	Citations (Scopus)	20%	Proportion of internationally coauthored research papers	2.5%
		SCI & SSCI	20%			Papers per academic and staff	6%
	Research impact	Highly cited researchers	20%			Research income from industry	2.5%
						Research income (scaled)	6%
				Citation impact normalised (WoK)	30%		
TEACHING	Quality of education	Alumni Nobel & Fields	10%			Income per academic	2.25%
				Student/staff ratio	20%	Undergraduates admitted per academic	4.5%
				International students	5%	Ratio of international to domestic students	2.5%
				International staff	5%	Ratio of international to domestic staff	2.5%
PRESTIGE	Prestige	Staff Nobel & Fields	20%	Academic reputation	40%	PhD awards / bachelor's awards	2.25%
						PhD awards per academic	6%
				Employers reputation	10%	Academic reputation (teaching / research)	15 / 18%
SIZE	Size	Size of institution	10%	Included in indicators		Included in indicators	

Source: Aguillo et al. (2010) and authors' elaboration

Table 1. Methodology of global university rankings

by society in general (students, parents, employers and other stakeholders) and, moreover, as various authors have argued, it is very difficult to accept that the Nobel Prizes and Fields Medals won by former students and current researchers are the most appropriate indicators for assessing the quality of education. As European University Association (2011, p.16) alleged, there is a demand for more “democratic” rankings. As other global league tables, ARWU classifies a few hundred of universities which are the “best” in the world: “in so doing, they are created problems for thousands of “normal” universities which simply do their job”.

The technical and methodological problems inherent in research outputs mean that such results are incomplete and therefore biased in many ways (Van Raan, 2005). Firstly, by using the number of articles published in the SCI and SSCI, outputs are restricted to research published in scientific journals; omitting alternative formats such as books, which in some fields are extremely important (especially in Social Sciences and Humanities). This criticism can be extrapolated to other classifications, as discussed below. Secondly, the abovementioned databases have a much stronger representation of journals in the Sciences fields (Life, Physical, Health) compared to others such as Social Sciences or, especially, and Humanities, which is virtually non-existent.

According to Harvey (2008), the status afforded by the ARWU ranking suggests that once a league table is published, its methodology is no longer questioned and its statistical data are taken to be objective, especially if this ranking reinforces commonly held prejudices and preconceptions regarding reputation. Universities from Anglo-Saxon countries and in general, from the North hemisphere perform better. Together with the unquestionable quality of many English language HEIs, these benefit from the fact that English is the international language of research, and many indicators are based on citations which benefit such HEIs. As Altbach (2006) remarks, Americans tend to cite Americans.

The following two global rankings arise from the splitting of the ranking that was published by The Times Higher Education Supplement in collaboration with QS Company, was the THE-QS World University Ranking, published annually since 2004. After 2010, the QS

Company has expanded the QS ranking to include the top 500 universities (<http://www.topuniversities.com>), classified, as Table 1 shows, according to six distinct indicators: academic peer review (composite score drawn from peer review survey); employer review (score based on responses to employer survey); Faculty student ratio; citations per faculty (citations of Scopus divided by the number of full-time equivalent staff at the institution); international Faculty (proportion of overseas staff); and international Students (proportion of international students). For 2011, this company has developed a specific ranking for Latin America called QS University Rankings Latin America. This ranking has in common with the QS World University ranking some indicators (academic reputation, employer reputation, faculty student ratio, international staff and international students) but includes new indicators (staff with PHD, web impact, papers per Faculty, citation per paper). In addition, the company has established other weights, justifying this change in the original indicators and the idiosyncrasy of this region.

Similarly to ARWU, it compiles a league table based on the various activities performed by universities, but also includes peer review (by academics from all over the world, experts in the relevant knowledge fields, employees, etc.), which provides a multidimensional view of the relative strengths of the world's leading universities. Furthermore, the weight of research activity is more nuanced, as citations received only account for 20 per cent of the total score.

The QS Ranking is well-known internationally, yet also highly controversial, due to its use of biannual assessments made by academic staff and employers, leading to two serious shortcomings. Firstly, it is a highly subjective ranking; the peer review results are strongly influenced by the country composition of the sample of experts consulted and also by the (unnamed) employers surveyed. Secondly, as Ioannidis et al. (2007) indicate, it is unlikely that any expert possesses a global view of the inner workings of teaching at institutions worldwide. Its remaining indicators are also highly questionable. The citations system is also biased in various ways, as mentioned above: not only does it favour the larger HEIs and those more specialised in scientific fields, it also generates a new bias in favour of those HEIs cited above the average and to the detriment of those below.

The new THE World University rankings (2010 and 2011) have some changes in relation to QS World University Rankings, with more data variables, with 13 variables in total, as shown in table 1. This new ranking weights divided between: Teaching - the learning environment (30 per cent of the overall ranking score); Research - volume, income and reputation (30 per cent); Citations - Influence research (30 per cent); Industry income - innovation (2.5 per cent) and International outlook - staff, students and research (7.5 per cent worth.)

However, despite being the last ranking in time, this league table has the same problems as the previous rankings: research has much more worth of what the indicator said, since the majority of variables used are directly or indirectly connected with it as well they combine new indicators into a final score as a "simple" calculation. With regard to the internationalisation of universities, an international staff and international students may be a good proxy of the ability to attract foreign talent and of the demand for education (from foreign students), yet the number of foreign students or the proportion of foreign academic staff is no guarantee of quality. In some cases, such as the UK, HEIs are unable to state how many international students (or even academic staff) they have, due to varying definitions and arrangements with overseas institutions (Harvey, 2008).

Due to the many criticisms, we can see a new strategy between the ranking providers in an attempt to relativize the results. To do this, besides the traditional global ranking, currently they offer new university rankings by field of knowledge or geographical location.

Taking into account the drawbacks of these rankings and their bias, a problem that can emerge is that universities are more worried for improving ranking positions than for improving quality. In an attempt to improve their positions in these three global rankings, HEIs can be tempted to improve their performance specifically in those fields which are measured by ranking indicators (European University Association, 2011). At the same time, their funding policies may be benefiting those areas (and faculty, schools, and centres) related especially to natural sciences and medicine to the detriment of the areas of social sciences and humanities. For this reason, self-regulation may not be sufficient and in autumn 2010, the International Rankings Expert Group (IREG) announced that it would start a rankings audit exercise.

2.2 Research university rankings

The following three league tables, much more recent, focus exclusively on research performance: these are the Performance Ranking of Scientific Papers for World Universities, elaborated by the Higher Education and Accreditation Council of Taiwan, the Leiden World Ranking, constructed by the Centre for Science and Technology Studies (CWTS) of Leiden University and the SCImago Institutions Ranking, compiled by the SCImago Research Group. These three rankings, devoted exclusively to research, are focused on bibliographic indicators, whether new or combinations of existing measurements.

Obviously, the sharp criticism aimed at these three major global rankings has recently led to the elaboration of new lists with reduced objectives i.e. the analysis of merely one aspect of research performance, namely scientific papers. Therefore, the Social Sciences, Humanities and Engineering are worst classified by principle in these three such rankings. The methodology employed by these three research rankings is outlined in Table 2.

The HEEACT ranking has been published since 2007 and provides results for the top 500 research universities and their location by continent and country. Beginning in 2008, this HEEACT has additionally classified the top 300 universities in six broad knowledge fields: Agriculture, Clinical Medicine, Engineering, Life Sciences, Natural Sciences and Social Sciences (which can in turn be classified by continent and country).

This ranking is based on data from various sources, supplied by the ISI Web of Knowledge (WoK). Comparability is thereby affected, for various reasons. Firstly, it focuses exclusively on papers published in scientific journals, ignoring publications in other formats (books, reports, projects, etc.). Secondly, the databases underrepresent publications in Social Sciences and Engineering and, above all, Arts & Humanities. Although the Arts & Humanities Citation Index (A&HCI) is also available, the HEEACT ranking does not include the database because “it may fail to objectively and accurately represent the research performance of arts and humanities researchers”. As European University Association (2011) said, the database mainly indexes English-language journals, while arts and humanities researchers often publish in their native languages and in various forms of publications (e.g. books). According to the rankers, focusing on data obtained from SCI and SSCI allows for fairer comparisons across universities globally.

Criteria	HEEACT				CWTS			SIR		
N° HEIs IN RANKING	500				500			3042		
RESEARCH	Productivity	Number of articles 1998-2008	10%	20%	Yellow	Number of publications (P)	Output	Number of publications		
		Number of articles 2008	10%		Blue	Citations per publication (CPP)	Int. Coll.	International collaboration		
	Impact	Number of citations 1998-2008	10%	30%	Light Green	Citations per publication by the size-independent, field-normalised average impact (CPP/FCSm)	Normalized Impact	Relationship of an institution's average scientific impact and the world average		
		Number of citations 2007-2008	10%		Dark Green	Citations per publication by the size-independent, field-normalised average impact (MNCS2)	High Quality Publications	Ratio of publications in the most influential scholarly journals of the world (first quartile) in their categories		
		Average citations 1998-2008	10%		Orange	Number of publications multiplied by citations per publication by field-normalised average (P*CPP/FCSm)	Specialitation Index	Thematic concentration / dispersion of an institution's scientific output		
	Excellence	H Index 2007-2008	20%	50%			Excellence Rate	Percentage of an institution's scientific output is included into the set formed by the 10% of the most cited papers in their respective scientific fields		
		Number of highly-cited papers 1998-2008	15%							
		Number of articles in high-impact journals 2008	15%							
	Source: Authors' elaboration									

Table 2. Methodology of research university rankings

As Table 2 shows, this ranking produces a synthetic indicator using eight variables in groups related to productivity, impact and excellence, neutralising the effect of institutional size by using the h-index indicator and adding the citation average. In our opinion, the effects of these additions are slight, since neither is suitable for dealing with data from fields with very different publication behaviours, while they both favour those fields which cite above the average. Four indicators are related to the number of full-time equivalent (FTE) faculty members (the number of articles in the previous eleven and the previous two years, and the number of citations in the previous eleven and the previous two years). In our view, this factor makes a interesting contribution to the ranking but in turn raises some important questions; for example, how has it been possible to obtain homogeneous data from different institutions and countries?

Another drawback to the HEEACT ranking is that, as in many others, the weighting of the variables is arbitrary. The double counting of articles has also been criticised, as these are allocated to all institutions involved in their elaboration; thus, an article produced in collaboration by various institutions is counted several times, as if it were an article produced by each of the participating HEIs. In certain fields (astronomy, for example) it is not unusual for articles to be signed by over 200 authors and include over one hundred HEIs.

Furthermore, the variables used reinforce rather than correct the biases possessed by the ISI databases. The system benefits those fields better represented in the sample, those with the greatest propensity to be cited, and those which, in general, accumulate a higher percentage of citations in the two years prior to the year evaluated. Its indiscriminate use may cause, therefore, undesirable effects (Gomez-Sancho and Mancebón-Torrubia, 2009).

In 2008 the Centre for Science and Technology Studies (CWTS) at Leiden University developed a set of four research rankings. The Centre enjoys great prestige in Europe and

worldwide, and its rankings are based on its own bibliographic indicators, giving them greater objectivity than the rankings reviewed above. Its more elaborate rankings (Dark Green, Light Green and Orange) have succeeded in eliminating some of the serious problems involved in the use of Web of Science and Scopus, by correctly identifying the institutions to which researchers belong and corrections for practically all errors and inconsistencies in the raw publication and citation data.

The CWTS employs a multi-indicator approach, with an identical methodology and database for the five colour-coded rankings; these are yellow, green (light and dark), orange and blue (Table 2), and give the top 100 and the top 250 European institutions and now, they show the top 500 worldwide. The data used are the papers published between 2004 and 2008 and the citations between 2004 and 2009. Each ranking focuses on a specific indicator; for example, the yellow ranking only takes into account the number of publications (which favours larger institutions) and, as in the previous cases, articles by researchers from more than one institution are counted twice, but in this case an effort is made to correctly identify HEIs. The blue ranking uses the number of citations per publication but is not normalised by field, to the detriment (as the authors warn) of certain universities such as those specialising in engineering or social sciences, as the number of citations per publication is significantly lower than in other fields such as medicine and health sciences as a whole. The two green rankings (light and dark) use two different indicators to relativize the previous indicator by normalising citation counts for the field and the year in which a publication was published. Thus, the light green rank use citations per publication which compare with mean field citation score (CPP/FCS and is called “crown indicator”), while the dark green ranking use the mean-normalised citation score (MNCS2 and is called “alternative crown indicator), as Waltman et al. (2011) have explained. Finally, the orange ranking multiplies the total number of publications by their relative impact in their given field. The important improvements made by the CWTS have not exempted it from criticism. Some such criticisms once again allege that it benefits larger universities (except for the green ranking) and focuses only on research (scientific papers), ignoring the other activities in which HEIs engage. More specific criticisms have focused on the inappropriateness of normalising bibliographic indicators by knowledge field (Ophthof and Leydesdorff, 2010), an issue which remains highly controversial (van Raan et al., 2010).

The last of the three research rankings was published for the first time in 2010 by the Spanish research group SCImago and takes the name of SCImago Institutions Rankings (SIR). It differs from the previous two in its data source; the publication and citation data used in its elaboration are obtained from the Scopus database compiled by Elsevier. It provides a ranking which includes all types of research institutions instead of being restricted to universities. It is much broader than the other league tables examined here; it comprises 3,042 institutions in the 3rd edition, all of which have published over 100 papers per year. The data it collects cover the years 2005-2009.

In the last edition (October 2011) SIR comprises six indicators (two of them are new): output, measured by the number of publications; international collaboration, measured by the percentage of articles produced through such joint contribution; normalized impact, the values, expressed in percentages, show the relationship of an institution's average scientific impact and the world average; High quality publications indicator is the ratio of publications that an institution publishes in the most influential scholarly journals of the

world; those ranked in the first quartile (25%) in their categories as ordered by SCImago Journal. The two new indicators are: the specialization index indicates which measures the extent of the matrix concentration/dispersion of an institution's scientific output, indicating generalist vs. specialized institutions respectively. This indicator is computed according to the Gini Index; and excellence rate, that is to say, proportion of output in the set formed by the 100% of the highly cited papers in their respective fields.

To sum-up, the last two above mentioned research rankings are a "good" research evaluation framework for science policy-makers, research managers and so on. As European University Association (2011) shown, ranking providers are trying to improve the methodology they use. In other words, improving the calculation methods is not enough; rankings should make efforts to cover all research areas on an equal basis. However, the improvements are often technical rather than conceptual. Despite these types of rankings having substantially improved the definition of research excellence, their failure to assess university teaching quality has been the subject of criticism, even sharper than the three major global rankings reviewed. This is because good research does not ensure good teaching and learning i.e. the quality of education. While it is difficult to find comparable indicators of teaching performance at a global level, it is unacceptable to exclude this important mission of HEIs, at least at international and national level. Moreover, regarding the journal citation impact factor itself, European University Association (2011) notes that, especially in social sciences and humanities, rankings do not correlate very well with impact factors. In the above fields and in engineering, other sources, such as books and proceedings, are important as well. A warning on this issue can even be found on the Thomson-Reuter's website which states that "the impact factor should not be used without careful attention to the many phenomena that influence citation rates".

2.3 Positive and negative aspects of rankings of higher education institutions

This proliferation of international rankings has led to many authors worldwide analysing their advantages and disadvantages (Altbach, 2006; Carey, 2006; Dill and Soo, 2005; Dill and van Vaught, 2010; Harvey, 2008; Hazelkorn, 2007 and 2011; Huisman, 2008; Marginson and Van Der Wende, 2007; Nkomo, 2009; Stella and Woodhouse, 2006; Thakur, 2007; Usher and Savino, 2007; Van Raan, 2005).

The impact upon HEIs of such uses of rankings is, in some aspects, highly positive. League tables allow improving data collection and providing more information on the Internet, causing HEIs to place increasing importance upon the information thus provided. There is no doubt that rankings can provide free publicity worldwide, especially for universities in the top positions in their country, region or area of influence (North America, Latin America, Europe, Australia, Asia, the Pacific, etc.)

Furthermore, rankings influence student choice of institutions at which to pursue their studies, particularly in so-called "overseas markets" (as a consequence of globalisation and the internationalisation of higher education). The impact (both inside and outside HEIs) of published rankings is increasing, due to their dissemination by the media. With regard to the recruitment of faculty and students of students, rankings may offer a good "business card" for the best placed HEIs, and such universities can compete more effectively for top scholars and the most able students. Other key stakeholders in higher education, such as

industries governments, etc. have an in direct interest in rankings, which have an important impact on research funding and fundraising strategies. Faculty and administrative staff have a direct interest in rankings,, while students are able to employ rankings in their decisions to study at institutions abroad.

Policymakers are also increasingly aware of the positions achieved by the HEIs under their responsibility. Some European countries (Germany, France, Spain, etc.) have implemented policies in favour of the construction of "international campuses of excellence", indirectly employing league tables to allocate public funding, by taking into account HEI performance in research or by "merging" public research institutions and technology centres with nearby cities and the socioeconomic environment. Finally, HEIs and leaders in higher education are strongly influenced by international rankings. Used correctly, these can stimulate strategies of reinforcing strategic research lines, increasing international projection, attracting international talent, creating a powerful network for knowledge transfer, etc.

Nevertheless, today's rankings have been (and will continue to be) strongly criticised; some such objections question the general usefulness of HEI rankings, while specific methodological criticisms have been described above. Some authors have gone so far as to describe such league tables as "nonsense" (Adler and Harzing, 2009); in addition to their many limitations, they allegedly measure quality in a "naïve" way (Harvey, 2008). Others argue that rankings are constructed using indicators of what can be measured rather than what is important to measure (Stella and Woodhouse, 2006), due principally to the lack of homogeneous data. Thus, global university rankings do not provide a complete picture of HEIs worldwide, as many of the indicators employed are only poor proxies of the attributes they purport to quantify.

Rankings are skewed principally toward research and, within research, toward articles published in scientific journals. This fact introduces serious doubts on the validity of ranking positions, since they represent neither all HEI activity nor all the research they perform. This partial analysis favours certain knowledge fields, publication formats (scientific papers) and research published in English. This situation is, to some extent, the result of funding for academic research and doctoral research education in all the developed countries also being strongly biased towards the sciences, medicine, and engineering (Dill and van Vught, 2010), meaning that rankings emphasising research in these fields may be justified in part as reflecting old biases and interests. It should also be noted that private universities outside the USA generally eschew research and doctoral training in the sciences and engineering, and thus these latter activities are more clearly a "public good" in most countries, undersupplied by the market; consequently, large public subsidies for these fields can be justified by a "market failure" argument. In contrast, many research fields in the humanities and social sciences, as well as non-university vocational and professional training, are dominated by the private university sector. Furthermore, the majority of rankings do not consider institutional size, meaning the top-ranked universities are the largest institutions (Dill and Soo, 2005, Usher and Savino, 2007). Thirdly, the weights applied to the indicators are often subjective and tend to be arbitrary and vary over time (Stella and Woodhouse, 2006).

Finally, the use of rankings has serious drawbacks for HEIs themselves. According to Carey (2006), they constitute a loss of freedom and independence for HEIs to control their "brand" and the terms of their success. Universities themselves have little influence on the methodology employed by international rankings. Indeed, rankings can conflict with other HEI priorities (for example greater attention to excellence in teaching or other specific

activities, such as continuous education) or national government goals (in particular, to encourage universities in the developing world) (IHEP, 2008). Lastly, rankings can also become a threat to equity, because they may limit access by disadvantaged students or may be used only by students from higher-income families (Harvey, 2008).

The unstoppable growth of rankings in Europe has led to the publication of a series of guidelines for rankings of European institutions. The International Ranking Expert Group produced the Berlin Principles on Ranking of Higher Education Institutions, which require that rankings must correspond to the problems or goals evaluated. The Group also concluded that multidimensional evaluations are more appropriate than a single overall score, especially in the classification and comparison of the missions and objectives of academic institutions with clearly different cultures and/or languages; consequently, it is more appropriate to distinguish between different types of HEIs and between different programmes and disciplines, particularly at the national level (or even at the regional level: Europe, America, Asia, the Pacific, etc.). In other words, the complexity of measuring and validly ranking the academic quality of institutions such as universities which pursue multiple goals and produce multiple outputs suggests that multidimensional rankings are likely to be more valid, all things considered, than synthetic rankings. This is the target of the two recent European initiatives undertaken by the European Commission to increase the visibility of European universities through two tools: the design of institutional profiles (U-Map) and a multi-dimensional global ranking (called U-Multirank).

In summary, the "power of seduction" of university rankings poses new challenges to elaborate alternative indicators which measure more precisely the different activities undertaken by HEIs (Nkomo, 2009). As Marginson and Van Der Wende (2007) note, it is necessary to reshape rankings to make them transparent, free from vested interests and methodologically consistent; although the producers of rankings try to employ an adequate methodological basis, it must be underlined that rankings may produce certain "perverse" effects in terms of improving ranking positions such as EUA (2011) said: inequitable student selection by elite universities ("reputation survey by students can be manipulated by directly telling students to lie"), an increase in HEI size to be able to compete ("merging universities just to get onto league tables") and "even bibliographic may be flawed due to the manipulation of the data (Assessment of University-Based Research, 2010). These consequences, in an attempt to improve their positions in the rankings, may already be occurring to some extent in parts of the academic and scientific worlds.

3. Humanities and social sciences in the university rankings: What is the matter?

The popularity of university rankings worldwide has meant that nobody (media, families, even governments) has questioned the indicators selected in the rankings and their weights. HEIs which two decades ago were compared only to others in their own country are now compared to peer institutions around the world. Universities in the Anglo-Saxon countries, which have produced rankings for over twenty years, obtain the best results. Together with the undeniable quality of many Anglo-Saxon HEIs, these are favoured by the fact that English has become the language of research and graduate programs, thereby benefiting English-speaking countries (Altbach, 2006). Moreover, the idiosyncrasy of many fields, social sciences and humanities among them, and the lack of good indicators at international

level, has led to a weaker position of these fields (programs and universities) at global university rankings.

Therefore, the problem in the rankings for the fields such as Social Sciences and Humanities lies in the minor weight that their relevant activities (both teaching and research) have in the indicators employed in these league tables. With regard to teaching activity, it is symptomatic that in almost all the countries, Social Sciences and Arts and Humanities are “catching” together more than a half of university students, not being rewarded their efforts in those global rankings. Moreover, these fields (and subfields) are penalized because, in many cases, the educational effort is higher in those studies and programs because they are continually increasing the number of students per group, more than in other fields.

Given the difficulty of finding qualitative indicators for this crucial activity, perhaps the most recognized one by society, ranking providers have chosen to reflect university research performance focusing on *scientific papers* (and bibliographic indicators) and to discard the search of other teaching and learning indicators which measure more accurately the teaching quality and excellence. As EUA (2011) has described, the quality of teaching is measured indirectly at the best. This criticism itself invalidates the results provided by the so called generalist international rankings, since one university could be in the top of these league tables only because of the excellence of its research activities, independently of its teaching performance.

If we consider higher education a key goal in our societies, it is essential that teaching and learning activities are measured and evaluated to provide an accurate picture of universities performance. This fact increases the urgency of developing internationally comparable indicators that allow teachers and scholars to measure this core activity. In this context, OECD is elaborating an Assessment of Higher Education Learning Outcomes (AHELO). This project is an attempt to compare HEIs internationally on the basis of actual learning outcomes. Three testing instruments will be developed within AHELO: one for measuring generic skills and two for testing discipline-specific skills, in economics and engineering. In these initial phases of the project, the developers have yet to find answers to a number of questions, including whether it is possible to develop instruments to capture learning outcomes that are perceived as valid in diverse national and institutional contexts.

Regarding research activity, as we have shown, the technical and methodological problems inherent in measuring research outputs mean that such results are incomplete and therefore biased in many ways. Firstly, the main format for the measuring of scientific knowledge are the articles published in the SCI and SSCI, that is to say, outputs are restricted to research published exclusively on papers published in scientific journals, ignoring publications in other formats (books, reports, projects, etc.). In the Web of Science, in the database sources such as SCI-EXPANDED, SSCI, A&HCI, the majority (more than 90%) of them are catalogued as articles, and later as proceeding paper, review, meeting abstracts, notes, editorial material, letters, book reviews, books, corrections, discussions, reprints, etc. Currently, Conference Proceedings Citation Index- Science (CPCI-S) and Conference Proceedings Citation Index-Social Science & Humanities (CPCI-SSH) are included. The problem of including these new databases is double: firstly, because many of these publications appear later as a traditional scientific journal articles (incurring double counting) and, secondly, the requirements of the reviewers for inclusion are usually much lower than in the scientific journals.

Secondly, the abovementioned databases have a much stronger representation of journals in the Natural Sciences and Medicine fields compared to others such as Social Sciences or, especially, Arts and Humanities, which is virtually non-existent. Thus, an exceptionally “good” university specialised in Humanities or in Social Sciences will never be classified in those league tables in the first positions.

Moreover, a more detailed analysis of the two major databases worldwide, Web of Knowledge and Scopus, unequivocally shows tiny prominence of both the Social Sciences and Humanities in such databases. This fact involves many disadvantages in the rankings that are translated into the results and figures shown below.

The Web of Knowledge from Thomson Reuters, the most used in the rankings discussed in this chapter, is a compendium of databases. Its main sources are scientific journals, although recently included scientific conferences. To know how many journals are used to obtain all the information needed to generate the database before, we have to turn to Master Journal List which includes all journals covered by scientific products.

Field	Papers	Citations	Cites per Paper	Percentage of Papers	Accumulated Percentage of Papers	Percentage of Citations	Accumulated Percentage of Citations
CLINICAL MEDICINE	2,094,266	26,401,171	12.61	21.23	21.23	25.42	25.42
CHEMISTRY	1,180,298	13,118,786	11.11	11.97	33.20	12.63	38.06
BIOLOGY & BIOCHEMISTRY	554,085	9,187,524	16.58	5.62	38.82	8.85	46.90
PHYSICS	865,207	7,471,580	8.64	8.77	47.59	7.19	54.10
MOLECULAR BIOLOGY & GENETICS	276,962	6,764,744	24.42	2.81	50.40	6.51	60.61
NEUROSCIENCE & BEHAVIOR	297,238	5,601,258	18.84	3.01	53.41	5.39	66.00
PLANT & ANIMAL SCIENCE	550,056	4,153,348	7.55	5.58	58.99	4.00	70.00
ENGINEERING	816,830	3,910,309	4.79	8.28	67.27	3.77	73.77
MATERIALS SCIENCE	459,129	3,268,171	7.12	4.66	71.93	3.15	76.92
ENVIRONMENT/ECOLOGY	269,152	2,989,116	11.11	2.73	74.65	2.88	79.79
PSYCHIATRY/PSYCHOLOGY	245,935	2,715,784	11.04	2.49	77.15	2.62	82.41
GEOSCIENCES	278,333	2,640,333	9.49	2.82	79.97	2.54	84.95
IMMUNOLOGY	121,714	2,572,216	21.13	1.23	81.20	2.48	87.43
MICROBIOLOGY	165,426	2,524,589	15.26	1.68	82.88	2.43	89.86
PHARMACOLOGY & TOXICOLOGY	185,581	2,224,182	11.98	1.88	84.76	2.14	92.00
SOCIAL SCIENCES, GENERAL	463,123	2,121,452	4.58	4.70	89.46	2.04	94.04
SPACE SCIENCE	122,081	1,743,100	14.28	1.24	90.70	1.68	95.72
AGRICULTURAL SCIENCES	207,058	1,432,603	6.92	2.10	92.80	1.38	97.10
ECONOMICS & BUSINESS	167,433	1,025,992	6.13	1.70	94.49	0.99	98.09
COMPUTER SCIENCE	262,878	999,267	3.8	2.67	97.16	0.96	99.05
MATHEMATICS	262,443	894,707	3.41	2.66	99.82	0.86	99.91
MULTIDISCIPLINARY	17,807	89,253	5.01	0.18	100.00	0.09	100.00

Source: Essential Science Indicators (updated as of September 1, 2011 to cover a 10-year +6 month period, January 1, 2001-June 30, 2001) and authors' elaboration

Table 3. Papers and Citations grouped by field in WoS

In 2011, 16772 journals were included. The best known databases are: the Science Citation Index Expanded (SCI), which includes data from 8401 journals, the Social Science Citation Index (SSCI) with data from 2995 journals, Arts & Humanities Citation Index (A & HCI) composed of 1656 journals. Among them, the Journal Citation Report (JCR) highlights, where the main journals are evaluated with different indicators. In 2010 edition, it included 8073 journals of sciences, 2731 in the social sciences and there was no edition for Arts & Humanities. The journals included in JCR total figures are less than the previous databases, because on the one hand, there are journals included in both editions and on the other hand, JCR contains journals that have changed their names or merged recently, but they remain to perform the calculations of the indicators for the new journals that have emerged recently.

This is already a first bias in favour of journals covering the fields called *scientific*, but this bias becomes overwhelming if we focus on the distribution of the number of articles or citations. Essential Science Indicators figures are conclusive. Firstly, Arts and Humanities fields are not considered and Social Sciences fields are playing a secondary role. Therefore, the papers published in the last decade are concentrated in the Sciences fields (and among them, 5 of the 22 areas have more than 50 percent), leaving underrepresented areas such as Social Sciences in general with 4.70 percent, or Economic & Business with a 1.70 percent. The conclusion is even worse when the quality through citation is measured: four areas have the 50 per cent of the citations and Social Sciences in general (with 2.04 percent) and Economics & Business (with 0.99 percent) are very residual.

To sum-up, the assessment process of research activity significantly impairs the development of both, the Social Sciences and the Arts and Humanities. They are a minority in the journals considered. They are considered marginally by focusing on the number of articles (where the Arts & Humanities fields are vanished). Finally, they are residual when they measure the quality of articles for the citations received.

Scopus is the other international database that provides research indicators on which the results of the current rankings are based, but this database has not been widely used as the well known WoK. Scopus is somewhat broader, but the problem can be to include “questionable” quality journals. This database tries to be positioned opposite the WoK, including more scientific publications worldwide (not only American) and more scientific publications in undervalued fields, belonging to the Social Sciences and Humanities. Table 4 shows the current journals, books, etc. that are the sources of this database. Taking into account the results, it should be noted that publications may be included in more than one field or subfield (up to 4).

It is important to note that the Social Sciences (which include Arts and Humanities) have a greater number of publications than the former database. But, as with WoK, when analysing the number of papers and citations, these fields are again penalized. This database also provides interesting information regarding to one of the biases that research results have among the different science fields and art fields. These are the different formats used for the dissemination of the results (Table 5). In summary, articles in journals are the “way out” almost exclusively in Natural Sciences and Medicine, while in other fields besides the articles, they include other formats. Thus, in Engineering, Architecture and Computer Science the proceedings have much more interest and in Social Sciences and Humanities both books and book chapters are very important.

Field (number of Journals, etc.)	Subfield	Number of Journals, Trade Journals, Books Series & Conference Proceedings
General (89)	General	89
Life Sciences (3955)	Agricultural and Biological Sciences(all)	1589
	Biochemistry, Genetics and Molecular Biology(all)	1619
	Immunology and Microbiology(all)	433
	Neuroscience(all)	403
	Pharmacology, Toxicology and Pharmaceutics(all)	633
Physical Sciences (6475)	Chemical Engineering(all)	517
	Chemistry(all)	751
	Computer Science(all)	1173
	Earth and Planetary Sciences(all)	900
	Energy(all)	321
	Engineering(all)	2186
	Environmental Science(all)	972
	Materials Science(all)	990
	Mathematics(all)	1024
	Physics and Astronomy(all)	922
Health Sciences (6235)	Medicine(all)	5706
	Nursing(all)	466
	veterinary(all)	177
	Dentistry(all)	131
	Health Professions(all)	328
Social Sciences (6003)	Arts and Humanities(all)	1756
	Business, Management and Accounting(all)	943
	Decision Sciences(all)	230
	Economics, Econometrics and Finance(all)	655
	Psychology(all)	884
	Social Sciences(all)	3524

Source: Scopus and authors' elaboration

Table 4. Number of Scientific Publications grouped by field and subfield in Scopus (2011)

In both databases, therefore, there is a bias that “damages” to Social Sciences and Humanities, the latter field even more pronounced. This is because these databases were not designed with an evaluation mission (or an assessment role) in the beginning, but later they provided data that allowed the development of quality indicators of papers and journals. More recently they have expanded their uses to evaluate institutions and even faculties and schools. In our view, the policymakers must be cautious with all these assessment processes because they are not yet recognized as suitable indicators by most experts and specialists, because all of them have their pros and cons.

Although this is not the aim of this chapter a detailed analysis of each of the indicators, it identifies the most representative ones. Clearly, both the number of articles and the citations received are the main indicators, i.e., those that derive all the others. In the Wok, particularly

Field	Books	Books Chapters	Journal Articles	Conference Papers
Chemical Sciences	0.2	2.1	95.7	1.9
Biological Sciences	0.3	6.3	90.7	2.7
Medical & Health Sciences	0.3	6.3	90.5	2.9
Physical Sciences	0.1	2.65	90	7.3
Mathematical Sciences	0.7	4.3	83.8	11.2
Earth Sciences	0.9	7.7	82.2	9.2
Agriculture, Vet, Environ	0.4	5.9	79	14.7
Psychology	1.5	17.4	76.2	4.9
Law	4.1	22.1	71.9	1.69
Philosophy	6	23.8	64.8	5.4
Economics	2.9	24.5	64.5	8
Human Society	3.5	27.8	63	5.6
Journalism, Library	3.4	15.2	57.2	24.2
Education	2.5	19.3	54.5	23.6
The Arts	4.4	20.8	54.5	20.3
Management	1.3	11.7	52.9	34
Engineering	0.4	2.5	52	45.1
Language	6.5	34	51.8	7.6
History	11.6	34	50.6	3.8
Politics and Policy	5.8	37.3	46.1	10.8
Architecture	3	17.8	35.6	43.6
Computing, Information Sci	0.4	4.6	32.8	62.3

Source: Scopus

Table 5. Percentage of type of publication or format grouped by field in Scopus

in the Journal Citation Reports, are included the popular Impact Factor, the Index and Cited Immediacy Half Life and recently added the 5-year Impact Factor Eigen factor Score and Article Influence Score. Scopus delegates to various specialists the preparation of the Source Normalized Impact per Paper (SNIP), created by Professor Moed (leader team of CTWS at the University of Leiden) and SCImago Journal Rank (SJR), created by Professor Moya (leader team of Scimago CSIC group).

4. Conclusion

Taking into account the described situation, there is a risk that these two fields, Social Sciences and Humanities, will be marginalized in universities around the world in the future, due to reduced (or lack of) visibility of their results in global rankings, because if the goal is to improve ranking positions of the HEIs in these league tables, the rationality would concentrate efforts in the Natural Sciences, Medicine, and perhaps in Engineering. This could lead to a society with a great technological and scientific development, but "illiterate" because of the "removal" of crucial aspects of human knowledge; even more dangerous if these results are linked to funding. How to change this dark perspective?

The solution is to make “more countable” the research in these fields, Social Sciences and Humanities, and to increase the visibility in the global university rankings of the so called second mission and even the third mission of the HEIs.

With respect to the measurement of the research in these fields, although there has been an increasing advance in the diffusion of results within the "scientific" standard in many of the sub-fields (economics, history or archaeology would be paradigmatic examples), some of them are still scarce. Should we change the way of spread the results giving less weight to scientific journal articles? Or should the databases providers try to capture what is being done in these fields of knowledge apart from scientific papers?

The international efforts under development (especially initiatives from the European Commission) have stimulated the transparency of HEIs activities, through the description of university performance (institutional profiles) which allows benchmarking. This transformation implies also to measure the impact of HEIs activities on many educational aspects. No longer can international rankings afford not to take into account the human capital of the new generations formed in higher education and the innovation activities of the HEIs. We must devote time and resources to these challenges.

We believe that both issues could take place simultaneously. The pressure of the need to publish (“publish or perish”) in prestigious journals is becoming more intense among faculty in these fields, but at the same time requires that books and book chapters appear in the databases, in order to highlight the outstanding formats of output knowledge in Social Sciences and Humanities. Once achieved, a more realistic picture of knowledge and scientific and artistic developments that arise in the universities, it is necessary that the indicators are constructed to evaluate these outputs, to minimize the bias currently observed among different fields of knowledge. This latter aspect, more technical, is essential for legitimating of the rankings, to guarantee the neutrality of the assessments among fields (and universities). In addition, the future global rankings have to be able to catch up the diversification and differentiation among universities (and countries) designing individual institutional profiles, so prevalent on university agendas actually.

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Scientific Publishing in the Field of Social Medicine in Slovenia

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1. Introduction

Science is cumulative. Science would not exist without the publication of research results. Publishing the results of scientific research is the basic characteristic of the process of scientific information and communication. The purpose of research in social medicine is to achieve enlightenment necessary for considered and effective health care. Social medicine covers the research of social factors that affect health or disease, examine interactions between medicine and society, and highlight social problems that affect health. Therefore, it is very important to publish results of research in the field of social medicine in an individual country, and by publishing in local scientific publications, enlighten the local professional public. Local experts who are aware of the research results can have more of an impact on the health in individual countries than foreign experts, especially if the studies performed are not the result of international cooperation, but the result of cooperation at the local (state) level. On the other hand, foreign experts and the international community should be reserved for presenting results of research at the international level, particularly at international conferences and congresses.

In a text that summarises the research of scientific communication up to the year 2000, it states that in a technological sense, scientific communication in recent decades has changed considerably due to the use of computers, electronic mail, digital libraries, the World Wide Web and the Internet (Borgman & Furne, 2002). But has this changed the behaviour of people involved in this process of scientific communication? Are we witnesses to revolution or evolution?

Bibliometrics is the exploration of the quantitative aspects of the production and the dissemination of written (scientific) information usage. Bibliometrics measures publications, patents, citations and other potential informative units or their properties, and uses them as the base for factors with which it measures and evaluates research, science and technology (Clarke et al., 2007; Costas et al., 2010; Južnič, 1998; Južnič, 1999; Takahashi-Omoe et al., 2009).

Bibliometrics provides a powerful set of tools and criteria for the study of structures and processes of scientific communication. Citation analysis, the most known bibliometric

method, has not only consolidated its supremacy, but is also developing and using the possibilities offered by digital libraries and links in the world wide web, and is co-shaping webometrics (Mur & Južnič, 2006).

The evaluation of scientific publications is very difficult. The most valid and objective assessment of a work would be the response from a wide group of experts who would obtain the work after its publication and inclusion in the global flow of information. A method, which would contribute to the evaluation of published works, is a citation analysis. The amount of references to an article, as a measure of its quality, has initiated further research of citations. The results of these studies are ideas that the frequency of references to scientific articles can be used as a criterion in their evaluation, as an aid for decision-making in research work management in the evaluation of scientific journals, in the selection of a journal best for publishing an article, and in assessing the success or research work of individuals and groups. We must realise that citation analysis measures only the response a work would trigger in the global scientific community and with it the quality of research work, but not the assessment of the entire activity.

Monitoring and dissemination of scientific achievements is an essential element of any research work. Impact is of crucial importance to scientific publications that in the process of scientific communication publish the results of research. Scientists contribute to this visibility with their publications. The result of the language barrier is the lesser visibility and impact of publications. Therefore, in scientific publishing, English has replaced other languages and has become the international language of scientific communication. The growing pressure of co-financiers on academic and research organisations in assessing their work leads to publication in high-profile international journals and often has the opposite effect on scientific communication in the local language.

The impact of a local scientific journal, which does not lag behind an international journal in terms of quality, in an international area, is possible only if it is concurrently published in English. This maintains professional terminology, enables greater international exposure for the contributors, including greater number of received citations, and according to the criteria of the Slovenian Research Agency (ARRS), higher quality publications. According to the results of analyses, we could expect greater financial support by the agency on local tenders for co-financing publishing of scientific journals, which would provide financial cover for translating articles into English. In Slovenia, it is important to ensure the highest quality of research. Since research work is linked to public funds, it commits researchers to present their results correctly (Demšar & Boh, 2006). The Rules of Indicators and Criteria for Measuring Scientific and Technical Efficiency used by the Co-operative online bibliographic system and services (COBISS) are used for monitoring research results in Slovenia. The system COBISS can monitor research achievements of each individual researcher, allowing us to evaluate their research results. Even though bibliometric indicators, including quoting, never constitute the sole criteria for evaluating the quality of research work, they do play an important part. Therefore it is essential to highlight all of its properties, especially in interdisciplinary areas.

The effort invested by an author in the preparation of a publication, is the same for a publication in an international or a local scientific journal. Regardless of where the research work is actually published, the authors more frequently choose to publish in prestigious

international scientific journals. The reputation criterion for a scientific journal is the citation index. The difference is probably whether publication in a prestigious international journal is really a sign of the publication quality.

2. Scientific communication and publishing

The scientific journal as a medium for the transfer of information was associated with the establishment and operation of the scientific societies in the 17th century. The first scientific journal appeared in Paris in 1665 under the name 'Le Journal des Sçavans' (Scholar's journal). As it said in the first issue, it was meant for those who do not have time to read books, but would nevertheless like to satisfy their desire for erudition. Among other things, the journal also covered anatomy. Three months later in London, the first issue of the scientific journal 'Philosophical Transactions', the newsletter of the Royal Society of London was published. The first authentic medical journal appeared in Paris in January 1679, entitled 'Nouvelles découvertes sur toutes les parties de la médecine' (New discoveries in all fields of medicine). The first English-language medical journal was 'Medicine curiosa: or, a variety of new communications in physick, chirurgery and anatomy', published in 1684. During the 18th century, 10 medical journals were being published, while by the 19th century, this figure rose to 436 titles. 'Lancet', one of the most important general international medical journals, started publication in 1823 and is still being published today. The publishing house Elsevier publishes the journal 'Lancet' once a week. As one of the most important general international medical journals, it publishes, summarises and evaluates achievements in clinical medicine. 'Lancet' is an important weekly journal for general practitioners from around the world. It has a very high impact factor; in 2010 it was 33.6 (25.8 in 2006). The journal publishes only about 5 percent of all received articles. Original articles, scientific reviews, editorials, book reviews, and case reports are published in the journal. In 2000, the independent journal 'Lancet Oncology', which covers the field of oncology, started with publication, a year later, 'Lancet Infectious Diseases' started covering the field of infectious diseases, and finally in 2002, 'Lancet Neurology', which covers the field of neurology began publishing. All three journals have an important place in the field they cover, although at the beginning they only published scientific reviews. All three journals have a high impact factor. In 2010, the journal 'Lancet Oncology' had an impact factor of 17.7 (10.1 in 2006), 'Lancet Infectious Diseases' 16.1 (11.8 in 2006), and 'Lancet Neurology' 21.6 (9.4 in 2006). In 1866, the 'Journal of Anatomy and Physiology' the first specialised journal started with publication (Marušić et al., 1996). For the majority of 300 years, scientific communication developed in the direction technologically determined by printing on paper, until electronic publishing appeared at the end of 20th century.

Over time, science increasingly developed, the number of scientists grew, and with them, the number of scientific publications. A single person (editor) could no longer cope with the selection of publications in a given publication. This led to the introduction of the peer review process. Experts from the specific subject matter the article described gave their views, comments, and reviews. Such reviews helped editors of scientific journals in deciding on the publication and the categorisation of each article. The peer review process has been developed to improve and enhance the quality of scientific information. Reviewing and

evaluation is necessary and beneficial for all those involved in scientific communication, as it helps science develop better and more successfully. Editors choose to work with reviewers from the field covered by the scientific journal. Usually, articles are reviewed by two or three reviewers. Articles that pass through the peer review process are categorised into three basic groups: original scientific article, scientific review paper, and preliminary note. Reviewers assess the quality of the article according to the criteria used by the scientific journal. Their assessment decides whether the article will be published or not. Scientists involved in scientific communication know which scientific journal has higher standards. Publishing a work in such journals is more difficult, but such publication is a guarantee for the high quality of the article, and consequently the impact of the article. This system of peer review provides scientists with access to exemplary scientific information. (Hebrang Grgić, 2004)

Publishing in the field of scientific communication has only really developed after World War II, primarily for natural sciences (Čuk, 2001), with the other scientific disciplines following. Scientific societies are no longer able to follow the great growth and changes in scientific communication, so publishing has continued by publishing houses. Publishers organise the evaluation of scientific articles by peer reviews, they edit and issue journals, and provide for their distribution. A trend of merging is present in publishing due to increased competition and lowering costs. The greater portion of published scientific periodicals is held by a relatively small number of publishers. After merging with the American publisher Harcourt General in 2001, the publisher Reed Elsevier had a 20 percent market share and issued around 1,700 individual scientific journal titles. Merging also increases the profit of publishers, allowing control over the intellectual production of universities in the western world. The contracts that the authors of scientific articles conclude with publishers dictate that these remain at the publishers' disposal another 80 years after their death. Research and studies are funded by universities; scientists research and publish their results and provide peer review of publications, while the copyrights, and thus the earnings are relinquished to the publishers.

In 1958, Dr Eugene Garfield borrowed 500 dollars from the bank and founded the Institute for Scientific Information (ISI) in Philadelphia. Current Contents of Chemical, Pharmaco-Medical & Life Science was their first collection, which included 286 journals. In 1961, on behalf of the National Institutes of Health (the funding body of research work in the world, which funds research in the field of biomedicine), the first citation index - Genetics Citation Index was composed. In 1964, the collection evolved into the Science Citation Index (SCI). The organisation quickly developed. By 1972, a million researchers worldwide were using the database. In 1978, two citation indices were printed, for the field of natural sciences (SCI) and for social sciences (Social Sciences Citation Index - SSCI). Since then, ISI has continuously grown and has remained the concept of documentation in the field of science (Južnič, 1999). In 1997, ISI launched a database with citation indices - Web of Science (WoS), which allows electronic access to the following databases: SCI-Expanded, SSCI, and Arts & Humanities Citation Index (A & HCI). After more than four decades of existence, the ISI database includes more than 16,000 international journals, books, and congress proceedings from the fields of science, social science, and humanities (Testa, 2003).

The online WoS provides access for three citation index databases SCI, SSCI and A & HCI to virtually all researchers. Data from 1970 onwards is included, and the databases are regularly updated. This means that what Adamič (1993) pointed out years ago, that the original purpose of this database, which is a base for citation analysis, is to link articles of related content through citations and allow efficient searching, has even more importance since. Evaluation of the success of a research work was at the time a secondary use, even though today, it is the most common and well known. He also points out that, because of the large differences in citations of articles between individual fields of medicine, it does not make sense to compare the citation of authors, research groups or institutions from different fields. One should only compare two equals. Such a comparison, especially in medicine, is practically impossible in a small country like Slovenia, as we do not have numerous research centres engaged with the same subject. Consequently it is necessary to always view comparisons of an international scope. The citation indices combined in WoS are losing their monopoly and exclusiveness (Scopus, Google Scholar, to name only two of the most famous competing tools), but nevertheless remain of paramount importance as the basis for the data employed in various bibliometric analyses. Especially in view of who their operators are. Elsevier, the largest publisher of scientific journals owns Scopus, which includes over 16,000 scientific journals and covers medicine (it fully covers the Medline database, which WoS does not), chemistry, physics, mathematics, engineering, biotechnology and ecology very well. It even has greater coverage of sociology, psychology and economics than WoS. The current advantage of using WoS rather than Scopus is that it has much more extensive archives, covering a longer period, and includes the arts and humanities. Another advantage of using WoS over Scopus is that it has tradition and, due to the long years of use, is very well established among scientists. Though, it is most likely due to competition that WoS has started to extend its own assortment of journals.

All countries, where the language of publication is not English, have the problem of visibility of their scientific contributions. This is also similar in Croatia, where an analysis was carried out that included 13 journals in the field of biomedicine published in the English language. Six journals were examined that are at the cutting edge of scientific publishing in Croatia. All six journals have been published for at least twenty years and all were published in English prior to 1995. Scopus indexed all six journals even before they started publishing in English in their entirety. After the journals started publishing in English, international visibility (they analysed indices in Medline, Scopus and WoS) was noticeable only with two journals (Croatian Medical Journal and Neurologia Croatica), while only one of the analysed journals (Croatian Medical Journal) managed to increase citation with international visibility. The analysis results showed that changing the publication language brings positive changes, including, international visibility of the journal, an international editorial board, increased publication of foreign authors, all of which are the basis for visibility and the integration of local authors into the global circle of scientific communication. (Pulišelić & Petrak, 2006)

Tensions have arisen among the various participants in scientific communication (Odlyzko, 1997). To ensure their existence, scientists as authors must publish; publishers market their journals and set high prices, while libraries cannot increase their procurement costs, and

scientists as readers are deprived. Yet it is scientists as authors who can decide in which journal to publish their work, their decision affected by the reputation of the journal, which usually has a high price.

Höök (1999) wrote that the increasing number of medical articles is not closely related to the increasing number of scientists in medicine, but in most countries is dependent on the scientific policy. Most doctors in university hospitals publish due to the phenomenon of 'publish or perish'. At times he wonders if there is hope that the flood of scientific information will not suffocate us. All that scientists can do is to raise the quality of scientific publishing. Authors should write and write their articles, and if they discover that they have not written anything new or important, they should rather abandon or bin their work. If scientists in small countries decide to publish their best papers in journals with high impact factors, then the fate of local journals is very grim. The result of not publishing the best articles is the lowering quality of local journals. In the long-term this spells the stagnation of locally published scientific journals.

2.1 Slovenian Journal of Public Health – Zdravstveno Varstvo (ZV)

In June 1962 the first issue of the journal ZV came out, as a professional newsletter with a clear programme: the dissemination of the scientific basis for implementing Slovenian (preventive) health policy and enlightening the wider and primarily the medical professional public with the evaluations, analyses and results of sociomedical research, (Kramberger, 1992).

In 2003, the new editorial board of the ZV set new content objectives. The basic concept of the journal remains the same. The journal discusses public health and primary health care; it encourages the publication of papers on public health issues and the development of public health, particularly in Central and Southeastern Europe. The contributions are divided into two basic categories. The first group of contributions includes editorials, review and research articles and short reports. The other contributions include technical reports, letters to editors and news. Special attention is dedicated to a better peer review process, which is inspired by the criteria that apply in all reputable journals. The most prominent local and foreign experts are invited to participate. They decided that by 2003, the journal will be published concurrently in Slovenian and English. In this way, they wish to continue to cultivate Slovenian professional terminology, but also allow foreign authors to publish contributions in the journal that could be read even by experts who are not familiar with the Slovenian language. From 1962 to 2002, the journal ZV was issued infrequently as a monthly, since 2003, the ZV has recorded regular publication with four issues annually (Švab, 2002).

As the publisher of the ZV, one of the objectives of the National Institute of Public Health is that the journal should be included in the SSCI in the coming years. Indexing in SSCI will show the visibility of the journal ZV, and thus the visibility of the contributions of our authors abroad. To achieve this objective, the following is necessary: the journal must be published in accordance with international standards; the contributions should also be in English and thus accessible to a wider circle of experts; the journal must be accessible over the Internet; it must be published regularly; special attention should be dedicated to a better and stricter peer review process - the most prominent local and foreign experts should be

invited to participate in the evaluation; authors who are already established in the international scientific community should be invited to participate in the editorial committee; authors who are already recognised and have published in journals with impact factors should be invited to write for the journal.

In recent years, a great progress of the ZV has been noticed compared with previous years. This is most likely due to the efforts of the editors and editorial board desiring to increase the quality of the journal with stricter peer review processes and compliance with standards for journal publication. Based on the registration for mass media in 2003 and the annual applications for co-financing the publication of periodicals, the Slovenian Research Agency (ARRS) has been co-financing the publication of the ZV since 2003. The share co-financed by ARRS is quite modest, and does not even cover half the printing costs in one year.

In 2009 the journal ZV was included in the SSCI-Expanded list indexed in WoS, and in 2010 was also included into the CAB Abstracts and Global Health databases.

By raising the quality and increasing the impact of the journal ZV in professional circles, motivation and interest to publish in the ZV will grow among experts in the field of public health. This was also confirmed by the bibliometric analysis for the period 2003-2009 when compared with the analysis results for the period 1992-2003 (Miholič, 2005, 2010). With the inclusion of the ZV into SSCI-Expand, the motivation for local authors to publish is greater, as according to the Rules of Indicators and Criteria for Measuring Scientific and Technical Efficiency, publishing is worth points, which the authors will need for scientific and research success in Slovenia. The more points the authors earn, the higher they rank, and the more chances they have with tenders for co-financing research projects by ARRS. Results of a quantitative analysis of the ZV 2003-2009 showed that, throughout the period analysed, more sources were cited per individual article (26.36) than in the period 1992-2003 (14.17). The share of articles with more than one author was also higher in the period 2003-2009 (between 2.3 and 3.3) than in the period 1992-2003 (between 1.17 and 2.31). Both analyses showed similar results: the predominantly cited material was published in English; articles were the most cited, followed by monographs. Comparative analysis of the periods 1992-2003 and 2003-2009 showed that more material in English was cited in the latter (63%, 78%), more articles were cited (56%, 65%), followed by monographs (33%, 23%). The authors cited mostly newer sources from the last five years (47.7%, 38.4%).

2.2 European Journal of Public Health (EJPH)

The EJPH is a multidisciplinary journal covering the fields of public health, social medicine, epidemiology, research in the field of health care, management, ethics, the law and economics of health care, ecology, and the field of sociology. The EJPH has been indexed in citation indices since 1999 (Table 1). Up to 2004 it was published four times a year, and in 2005 it began publication as a bimonthly journal. The journal publishes original scientific papers, articles covering current topics, book reviews, news, letters to the editor, and event announcements. The journal has a section for discussion and polemics on current topics of public health, especially concerning countries of the European Union. The journal is indexed by the following important databases: CAB Abstracts, CINAHL, Current Contents / Clinical Medicine, EMBASE, PubMed, and Science Citation Index.

year	impact factor
1999	1
2000	1.165
2001	1.152
2002	0.624
2003	1.281
2004	1.051
2005	1.118
2006	1.481
2007	1.91
2008	2.176
2009	2.313
2010	2.267

Table 1. EJPH impact factor

3. Review of the development of social medicine

In the past, medicine was mainly oriented towards the treatment of diseases. It began shaping as a science in the Middle Ages. Little attention was focused on factors that caused disease, and there was neither interest in the social environment and other environments in which man lived, nor in what the implications of disease were for human society, and their impact on human health (Pirc, 1980).

During the middle of the 19th century, medicine began to develop primarily as a pure natural science. Disease and health began to be associated with the operation of then discovered biological, chemical and physical factors that affect the human body and act in it. At that time, medicine began to ever increasingly focus on the causes of disease. Hygiene, the first science of protecting and improving health, appeared and deliberately started to discover the role of social environments. The activity occupied with the effects of hygiene, preventive medicine, and public health increasingly established itself and soon independently evolved into social medicine that began to explore the aetiological role of socioeconomic and educational conditions in which man lives, in the development of disease. Consequently, medicine became a socionatural science (Pirc, 1980).

Medicine, like any other branch of science and technology, is based on theory. It is perfectly possible to treat people, not being aware of the theory, let alone doubting the theory. Scientific information in medicine is derived from observations or experiments. Thus, in the 20th century, scientific achievements accumulated in natural sciences and medicine, and are still accumulating. Genetics, biochemistry, chemotherapy, surgery, psychoanalysis were all developed. As in all the centuries before, medicine in the 20th century reflected social and political conditions. Poverty, hunger, infectious diseases were all the main issues of health policy. Such conditions were fertile ground for the operation of social models in medicine, which at that time formed from the foundations of modern scientific achievements. According to the principal tasks, medicine is divided into curative medicine (with the objective of treating disease), prevention (aimed at preventing disease), and social medicine (which examines the socioeconomic determinants of health and disease). In Yugoslavia (Urlep, 1992) represented a sociomedical model of health care, thought up by the Croatian

doctor Dr Andrija Štampar during the 1920's. Andrija Štampar based all medical fields related to population health (hygiene, epidemiology, and other) on social medicine and human health. He was the first major proponent of this modern principle. He worked in former Yugoslavia, and was also one of the founders of the World Health Organization (Švab, 2004).

In Slovenia, we quickly followed the trends in preventive medicine by establishing the Central Institute of Hygiene, Ljubljana as early as 1923 (B. Pirc & I. Pirc, 1938), which became the National Institute of Public Health with the extensive network of regional institutions.

The aim of research in social medicine is to achieve enlightenment necessary for efficient and effective health care. Social medicine discusses health and health care based on the findings or results obtained from mass observation (Pirc, 1980). Health care is care for the health and progress of an entire regulated society, and for all social and economic activities that must accept this care as a task for the entire society, with each of them contributing in their field (Pirc, 1980).

3.1 Definition of social medicine

The term 'social medicine' was first used by Jules Guérin in Paris in 1848. Guérin divided social medicine into social physiology, social pathology, social hygiene and social therapy (Jakšič, 1994).

Here are some definitions of social medicine (Pirc, 1980) by the most famous authors in this field of medicine. The first definition is from 1904, formed by the first founder of social medicine, Alfred Grotjahn, and reads: '... as a descriptive science, it is the study of the conditions from which generalisation of the culture of hygiene, of communities, individuals and their descendants who live in local, temporal and social community, is dependent ... as a normative science, it is the study of measures which aim to achieve the generalisation of the culture of hygiene among all individuals and their descendants who live in the local, temporal and social community.'

In 1923, Prof Dr Andrej Štampar in his inaugural lecture as professor of hygiene and social medicine at the Medical Faculty in Zagreb defined social medicine as follows: '... science that deals with the study of interlinked social and pathological conditions in the life of the population, and with the development of measures of a social nature for improving human health.'

In 1962, Radomir Gerič wrote in his book *Social medicine*: 'Social medicine means care by the community, the state, and society as a whole for the health and wellbeing of the entire population. Ultimately, this would mean that social medicine is the same as population health care.'

In 1962, Mervyn Susset and William Watson wrote in the book *Sociology in medicine*: 'Social medicine is thus a complex and important branch of medical science in that it attempts to capture the nature of social processes as well as their relationship complicated with health and disease.'

From these definitions we can summarise that social medicine discusses disease and health from the perspective of society and its functions in health care relative to the social factors

that are present in real social communities and the entire population. It considers in its scientifically founded proposals both the interests of a defined society and the actual possibilities in it.

Everything is changing, so it is important to adapt to new conditions when we try to implement principles such as concern for the social conditions of life, an integrated approach to health care, and the importance of learning. The future must not repeat the past, but must spring from it. Social issues are not only a biological phenomenon, but are linked to the social sciences and culture that emphasise the importance of moral issues (Jakšič, 2004).

4. Bibliometric analysis of the ZV and EJPH

Data from a review of the ZV and EJPH publications were collected from the year 2003 to 2010 inclusive. Throughout the period analysed, the journal ZV was published as a quarterly. In the analysed eight-year period, 32 regular issues of the ZV were reviewed. The analysis included all original and review scientific papers; contributions published as editorials, letters to the editor, reports and necrologies were not included. 164 articles were reviewed in the analysed period. All articles included in the analysis had cited references. On average, 26.36 references were cited per article (Table 2).

During the period from 2003 to 2004, the journal EJPH was published four times a year; from 2005 onwards it was issued as a bimonthly, entirely published in English. In the analysed eight-year period, 44 regular issues or 711 articles were reviewed. All the 711 analysed articles from the EJPH cited references. With 22,080 references listed in the 711 articles, that is an average of 31.05 references per article (Table 2).

Since in Slovenia the Rules of Indicators and Criteria for Measuring Scientific and Technical Efficiency determine that a scientific paper must be at least four pages long, otherwise it is considered a short scientific contribution and is estimated only with 80% points, the analysis only included articles that were comprised of four or more pages.

4.1 Results of the bibliometric analysis of the ZV and EJPH

In the period 2003-2010, a total of 454 authors published 164 articles in the journal ZV. Table 2 shows the number of authors per year of publication and the number of authors per article in each year. Throughout the period analysed for the ZV, the ratio ranged between 2.3 and 3.3. Compared with the ZV analysis for the period 1992-2003 where the ratio ranged between 1.17 and 2.31 (Miholič, 2005), the ratio has increased, reflecting a trend also present in the world (Cronin et al., 2003; Cronin & Franks, 2006); namely, that the authorship of an article belongs to more than one author.

If we compare the results of the ZV with the results of the EJPH, where the ratio varies between 3.89 and 4.78 (in the period 2001-2005, the ratio ranged between 3.4 and 4.55) (Miholič, 2007) and the findings of the Radiology and Oncology analysis (in the period 1992-2001, the ratio ranged between 2.51 and 3.93) (Musek et al., 2003), we can see that multiple authors are present in all journals, which shows that articles not only reflect teamwork on research projects, but also the collaboration of authors from various scientific disciplines.

Multiple authors both increase the credibility of a research work and the possibility of co-financing research projects.

In both the ZV and EJPB journals, the de Solla Price (1971) theory on separating articles into scientific and unscientific utilising the number of citations (scientific articles are those with between 10 and 20 citations, unscientific articles are those without citations), shows that all published articles were actually scientific articles. Similar results were also obtained at the Radiology and Oncology journal (in the period 1992-2001, there was an average of 18 references for each article) (Musek et al., 2003).

year	ZV					EJPB				
	no. of authors	no. of articles	r*	no. of citations	r**	no. of authors	no. of articles	r*	no. of citations	r**
2003	47	19	2.47	438	23.05	230	59	3.89	1529	25.91
2004	56	24	2.33	452	18.83	360	79	4.55	2250	28.48
2005	64	21	3.04	466	22.19	448	103	4.34	2830	27.47
2006	46	20	2.3	566	28.3	411	93	4.41	2945	31.67
2007	49	18	2.72	445	24.72	415	90	4.61	3004	33.38
2008	65	20	3.25	658	32.9	453	97	4.67	3316	34.18
2009	66	20	3.3	648	32.4	435	91	4.78	2985	32.08
2010	61	22	2.77	651	29.59	458	99	4.63	3221	32.54
total	454	164	2.76	4324	26.36	3210	711	4.51	22080	31.05

Legend:

r* - ratio no. of authors / no. of articles

r** - ratio no. of citations / article

Table 2. The number of authors and citations in the analysed articles, 2003-2010

In eight years, articles in both Slovenian and English were published in the journal ZV. Figure 1 shows the number of articles by individual years in Slovenian and English. Most of the articles in English were published by Slovenian authors. In 2003, four of the articles in English were by authors from the United Kingdom, Netherlands and Sweden, and three by authors from Slovenia. In 2004, one English-language article was by an author from Finland and one article by a Slovenian author. In 2005, the sole article in English was by a Slovenian author. In 2006, two articles in English were the result of international collaboration; one article was by authors from Slovenia and Germany, the other by authors from Slovenia and the United Kingdom. The authors of the remaining four articles were from Slovenia. In 2007, one article in English was by authors from Serbia, and five articles again by authors from Slovenia. In 2008 and 2009, all articles in English were by authors from Slovenia, while in 2010 one article was by authors from Albania, and one article was again the result of collaboration by authors from Slovenia and the Netherlands. All the remaining five articles in 2010 were again written by Slovenian authors. Publishing foreign authors in the journal ZV was more of an exception; the reason Slovenian authors published articles in English may well be the result of those articles being written and prepared for publishing in a foreign journal, then due to a possible rejection, the Slovenian authors decided to publish in local journals. The English-language articles published by Slovenian authors were the result

of research carried out at the local and state level, and not from studies resulting from international cooperation, with the exception of articles in 2006, which were published in collaboration with foreign researchers. Despite the fact that the article in 2010 originated by collaboration with a foreign researcher, it was the result of research related to health policy in Slovenia and not in the international arena.

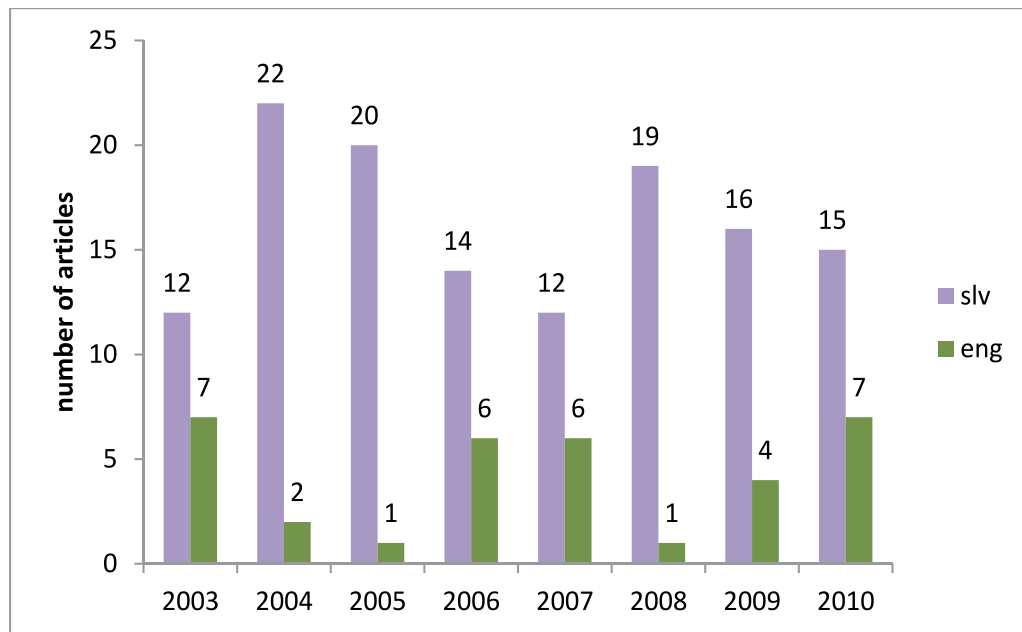


Fig. 1. The number of Slovenian and English-language articles published in the journal ZV, 2003-2010

Since EJPH is an international and multidisciplinary journal, the authorship of published articles belongs to a broader international circle of scientists (Figure 2). Over a period of eight years, authors from all continents, that is, from all over the world published in the journal. Only the most represented and recurrent countries of authors publishing articles in the EJPH in the period 2003-2010 are included in Figure 2. Throughout the entire analysed eight-year period, authors from the Netherlands were the most represented (38, 38, 40, 64, 50, 51, 49, 74). With the exception of one year, they are followed by the British (17, 66, 33, 39, 66, 48, 47), who did not published in 2003, the Spanish (26, 67, 42, 35, 40, 35, 32) who published nothing in 2010, and the Finns (11, 35, 39, 39, 49, 42, 47), who were without any publications in 2005. The Swedes also had many publications (24, 24, 35, 45, 36), except in 2006, 2009 and 2010, when they did not publish a single article. The Italians published (14, 53, 36) in 2003, 2005 and 2010, while the French (39), Germans (34) and Danes (24) had numerous publications only in one year. It is interesting that the majority of the most represented are scientists who come from countries where English is not the native language, with the exception of the United Kingdom, of course. The fact is that scientists strive for greater visibility, not only at the national level but also at an international level, which is why they choose to write and publish articles in English, even though it is not their native language. Despite this fact, scientific journals have a long tradition of publication,

and in some countries (e.g. Italy) insist on publishing a national journal in the field of public health, since it is more natural to read articles in their native language, which most people also prefer (McCarthy & Clarke, 2007; McCarthy & Paná, 2007).

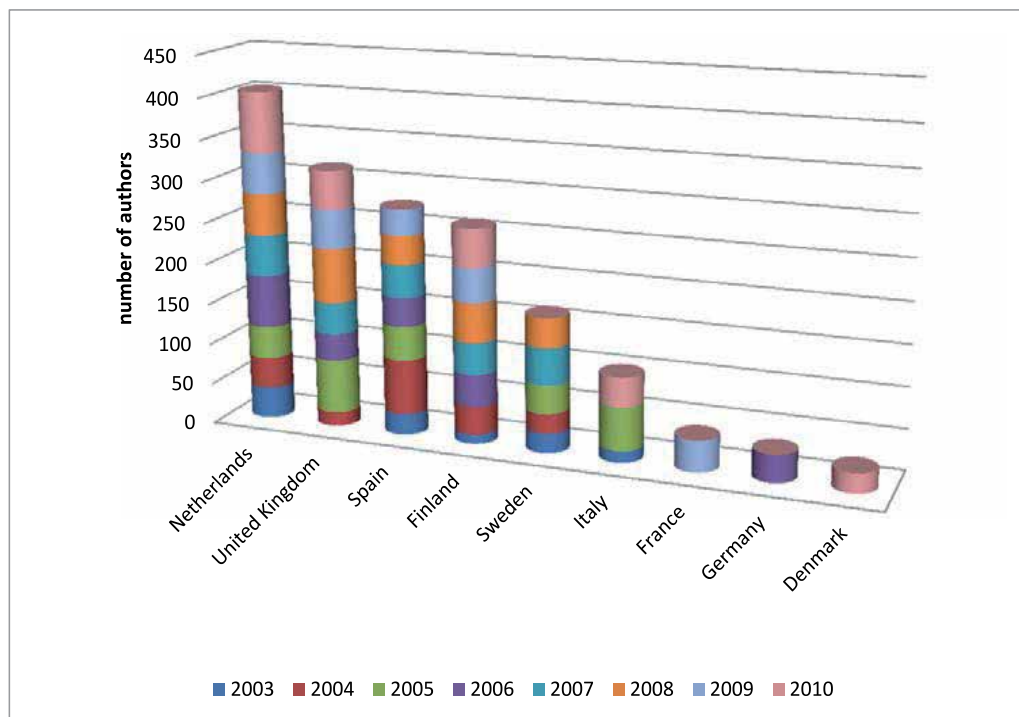


Fig. 2. Authors by country of origin in the journal EJPH, 2003-2010

Figures 3 and 4 show the number of articles relative to the number of authors for each article in a particular year. The dispersion in Figure 3 for the journal ZV in comparison with the EJPH lets us conclude that the Slovenian journal has too few multi-author collaborations, a trend quite present with the journal EJPH and visible in Figure 4. One reason for this could be that the body of potential writers and researchers publishing in the Slovenian journal is smaller than that for the journal EJPH. Since Slovenia is a small country with a small body of scientists researching and publishing in a particular field, which is also apparent by the number of articles published in the ZV, we could reasonably expect that the collaboration of scientists with their colleagues abroad would be more present (Clarke et al., 2007). But unfortunately, it is not. Despite the knowledge that both journals have no restrictions accepting articles and that everyone may publish in the Slovenian journal, including English-language articles removing the language barrier. The cause can also lie with the smaller interest from both local and foreign non-Slovenian authors, since the Slovenian journal does not yet have large recognition, and publishing in the journal does not bring international visibility, or perhaps the reason lies in the insufficient international cooperation of Slovenian scientists with those abroad in the field of social medicine and health care.

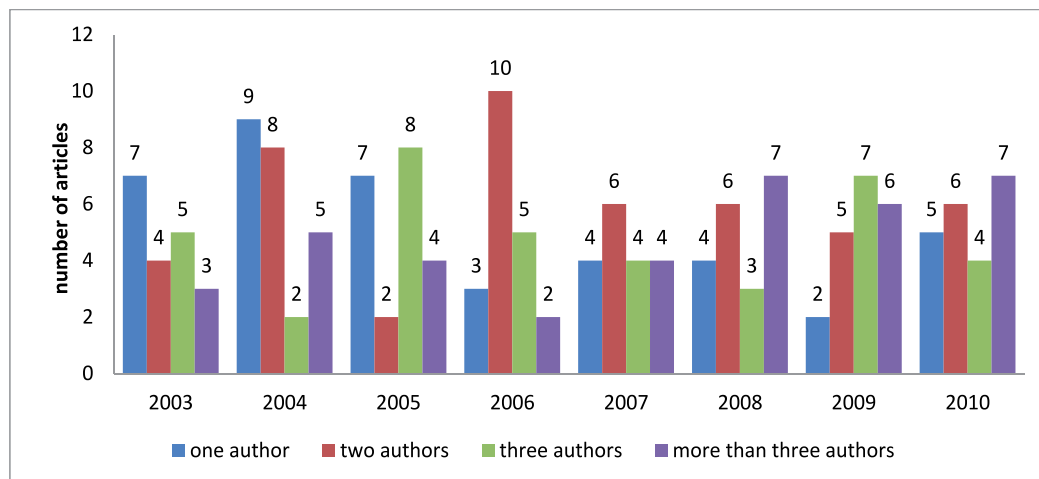


Fig. 3. Number of authors for each article at the ZV, 2003-2010

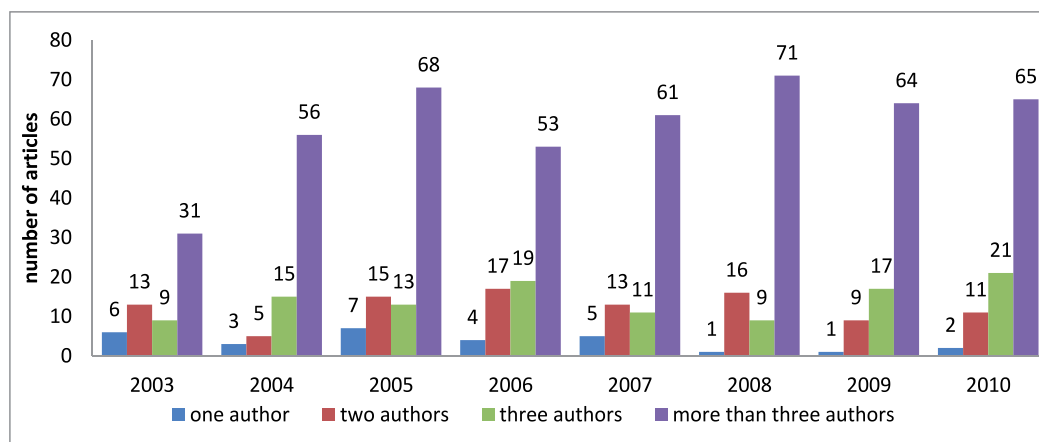


Fig. 4. Number of authors for each article at the EJPH, 2003-2010

Throughout the analysed eight-year period, a quarter of the articles at the journal ZV were written by a single author, almost 29% of the articles had two authors, slightly less than a quarter of the articles were written by three authors, and almost a quarter of the articles had more than three authors. For the EJPH, the ratio was different. Two-thirds of the articles had more than three authors, 16% of the articles had three authors, 14% of the articles had two authors, and only 4% of the articles were written by a single author (Figure 5).

If we compare the results of the journals ZV and EJPH (Figure 3, Figure 4) with the results from the journal Radiology and Oncology (Musek et al., 2003), multiple authors are more

common for the latter two (EJPH, and Radiology and Oncology), which indicates that the articles reflect the teamwork on research projects as well as collaboration by authors from various scientific disciplines. Multiple authors increase the credibility of a research work, and the possibility of co-financing research projects. Studies worldwide have shown that the average number of authors per article in journals included in the Journal Citation Report (JCR), rose from 1.83 in 1995 to 3.9 authors per article in 1999 (Cronin, 2001).

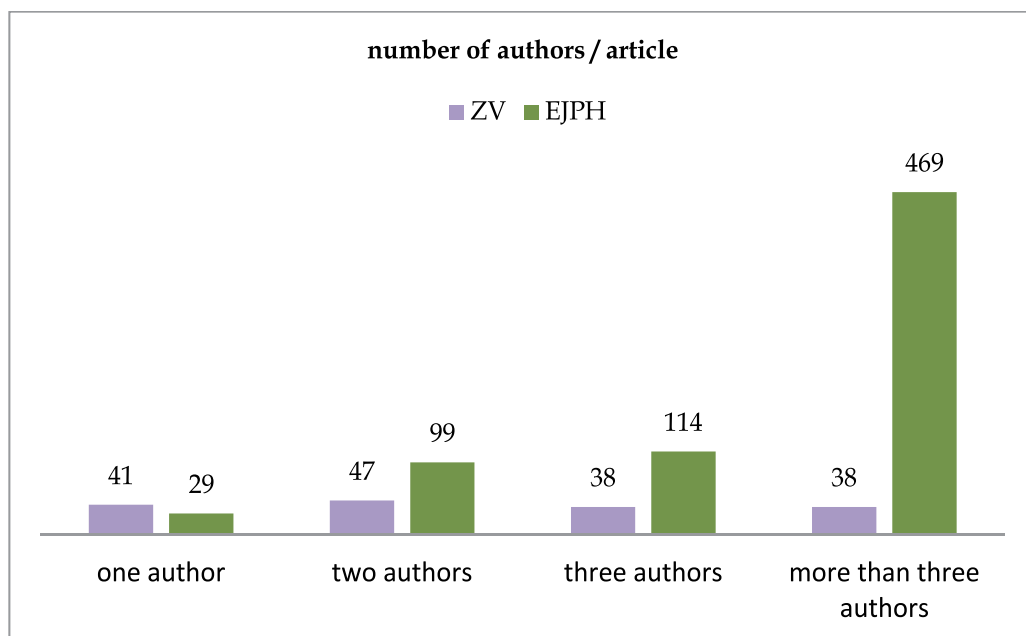


Fig. 5. Number of authors at the ZV and EJPH in the period 2003-2010

4.2 Citation analysis

The citation analysis included all citations and references that authors listed at the end of their articles in the chapter Literature.

In the citation analysis we determined the following article characteristics in the journal:

- language of cited publications (Table 4),
- citation of various sources of information (Table 5),
- citation age (Table 6).

4.2.1 Analysis of cited publication languages

Authors who published in the ZV during the years 2003-2010, predominantly referenced literature in English, the second place was taken by literature in Slovenian, followed by literature in German and other languages such as Serbo-Croatian, Italian, and Swedish (Table 4). Similar results were seen in the period 1992-2003, when authors predominantly used literature in English, followed by Slovenian-language literature (Miholič, 20005). The portion of English-language literature was lower (63%) in the period 1992-2003, while the portion of literature in Slovenian was higher (32%) than in the past eight years (Miholič, 2005). In the analysed period 2003-2010, 78% of the cited literature is in English, 21% in Slovenian, while the portion of other languages is very low (1%). The portion of cited literature in English in the journal EJPH was higher (94%), with almost six percent in other languages, and less than one percent in Slovenian.

year	ZV			EJPH		
	citation language			citation language		
	slo	eng	other	slo	eng	other
2003	69	365	4	0	1347	182
2004	128	312	12	0	2114	136
2005	143	318	5	0	2643	187
2006	113	450	3	17	2755	173
2007	74	366	5	0	2877	127
2008	115	539	4	0	3166	150
2009	120	528	0	0	2814	171
2010	173	473	5	7	3042	172
total	935	3351	38	24	20758	1298

Table 4. Number of cited publications relative to the year and language of the cited publications, 2003-2010

4.2.2 Analysis of the citation of various sources of information

For the analysis of the citation of various sources of information, we separated the cited literature into articles, monographs, contributions from conferences, and other (grey literature, regulations, official journals, statistical publications and electronic publications). The analysis showed that during the analysed period, authors most frequently cited journal articles (65% at the ZV, 76% at EJPH), followed by monographs (24% at the ZV, 18% at EJPH), while the smallest portion of cited literature (11% at the ZV, 6% at EJPH) was from congresses and literature listed under 'other' (Table 5). Today, articles in scientific journals are one of the most important information sources in science. The advantage of articles over monographs is primarily their currency, since the publication of a specific monograph takes a lot longer than the publication of an article in a scientific journal.

year	ZV				EJPH			
	citation type				citation type			
	articles	monographs	congresses	other	articles	monographs	congresses	other
2003	274	143	6	15	1097	392	5	35
2004	227	163	18	44	1764	440	7	39
2005	287	107	19	43	2092	666	17	55
2006	368	138	19	51	2233	458	8	246
2007	285	112	12	36	2306	464	13	221
2008	482	105	11	60	2539	552	12	213
2009	479	84	22	63	2369	462	11	143
2010	401	167	20	63	2485	481	1	254
total	2803	1019	127	375	16885	3915	74	1206

Table 5. Number of cited publications relative to year and type of information source, 2003-2010

4.2.3 Citation age analysis

With the citation age analysis, we can usually ascertain how quickly an individual scientific discipline developed within a specified period of time. The use of literature and its citation varies among the scientific disciplines relative to the age of citations. We know, for example, that the fields of medicine and natural science use newer cited literature than the humanities (Mihajlov & Giljarevskij, 1975).

It is clear from Table 6 that most of the analysed articles, from both journals and by individual years, contained citations and references aged 0-10 years. At the journal ZV, in the period 2003-2010, on average a good third of the literature used in articles was in the 0-5 years age group (1,519 citations), with a similar portion present in the journal EJPH (7,642 citations). This was followed by a poor third of articles that had citations from the 6-10 years age group (1,341 citations), while the EJPH had a good third of citations from the 6-10 years age group (8,096 citations). Both journals, ZV and EJPH had 17% of articles with literature from the 11-15 years age group (766 citations at the journal ZV, 3,689 citations at EJPH). There were 9% of articles that had literature from the 16-20 years age group (419 citations); the same portion was seen with the journal EJPH with 1,854 citations. References older than 21 years were found in only 6% of the articles (279 citations) at the ZV, and 3% of articles (799 citations) at the journal EJPH.

In a review of the American Journal of Public Health for the period 2003-2005, authors also cited newer literature: half of the cited literature was 0-5 years old, and a good quarter of the cited literature was in the 6-10 years age group (Rethlefsen, 2005).

In their contribution, Musek et al. (2003) compared the results of the bibliometric analysis of the journal Radiology and Oncology for a ten-year period with a related international

journal *Neoplasm*. The results of the bibliometric analysis of Radiology and Oncology for the period 1992-2001 showed a constant number of articles per year, predominated by multi-author articles. In the journal Radiology and Oncology, citations in English were in first place, followed by citations in German and Slovenian, then other languages such as Croatian, French, Italian and Czech. Articles were the most cited, followed by monographs, congress contributions and grey literature. In 1992, a quarter of the citations in the journal Radiology and Oncology were from the 0-5 year age group, while in 2001 the portion increased to 42.3%. In the period 1992-2001, the portion of citations from the 6-10 years age group ranged between 24.8 and 30.6%. The portion of articles with citations from the 11-15 years age group decreased in the analysed period from 21.5% in 1992 to 13.3% in 2001; similarly, the portion of articles with citations from the 16-20 and over 20 years age group decreased in the period 1992-2001. The data shows a greater use of newer literature in recent years.

year	ZV					EJPH				
	citation age					citation age				
	0-5 years	6-10 years	11-15 years	16-20 years	>21 years	0-5 years	6-10 years	11-15 years	16-20 years	>21 years
2003	181	150	48	24	35	519	604	260	139	7
2004	197	117	63	27	61	563	906	458	316	7
2005	180	131	86	29	42	751	1135	514	414	16
2006	200	192	95	72	12	993	1099	457	244	152
2007	149	134	93	66	3	1079	1100	498	173	154
2008	203	213	130	59	54	1373	1128	518	164	133
2009	213	207	120	65	43	1160	992	466	204	163
2010	196	197	131	77	50	1204	1132	518	200	167
total	1519	1341	766	419	279	7642	8096	3689	1854	799

Table 6. Number of cited publications relative to the year and age of cited sources, 2003-2010

5. Conclusion

Apart from the financial support provided by the agency, the evaluation of Slovenian scientific journals is of vital importance. Professional bodies (scientific councils for individual areas) evaluate Slovenian scientific journals, and based on their quality place them on a list of journals not included in international bibliographic databases, while they are taken into account for the categorisation of scientific publications. Based on the Rules of Indicators and Criteria for Measuring Scientific and Technical Efficiency Slovenian scientific journals and the publications in them are considered by scientific performance. Such evaluating and scoring in the researchers' bibliographies allows for the preservation of issues and the influx of higher quality scientific articles in Slovenian scientific journals that are published in Slovenian. Despite a journal not being internationally acclaimed, due to the

scoring provided by the rules, the researchers should endeavour to publish in Slovenian, to inform colleagues of their research results in Slovenian, and not only strive for international exposure and recognition.

Results of a quantitative analysis of the journals ZV and EJPH for the period 2003-2010, showed that throughout the period analysed, more sources were cited per article in the EJPH (31.05) than in the ZV (26.36). The portion of articles with more than one author is increasing in both journals. Both journals obtained similar results: material published in English was predominantly cited; articles were cited the most, followed by monographs. The results force us to consider that the research and technical field of health care is undoubtedly a medical field that has strong characteristics of social science as it deals with medicine, health care and health as a social phenomenon. The methods used in health care are close or even identical to those in social science, which is reflected in the manner of research and publication. Research in the field of health care has to be assessed and evaluated differently than research in other fields of medicine, e.g. in clinical medicine. Because this concerns Slovenian-language publications in the sole Slovenian journal (and the very existence of the journal for this field on Slovenian territory), they are evaluated differently and have different weight.

Comparison of the results of bibliometric analysis of the Slovenian Journal of Public Health - Zdravstveno varstvo (ZV) and the European Journal of Public Health (EJPH) for the period 2003-2010, has led us to the conclusion that the ZV is not behind EJPH. Therefore, Slovenian scientists could also publish the results of their research projects as scientific papers in local scientific journals. The difference in publication is that publishing in EJPH brings greater exposure and a greater number of received citations, which every author wants, yet scientists should have an interest in maintaining local scientific journals and informing the local professional public of their findings, and not just in scrambling for citations.

According to analyses, we can conclude that the impact of local journals in an international context is only possible if they are concurrently published in English. Therefore, greater international exposure can be assured for the authors' contributions, which increases the authors' interest in publishing in local journals. In the future, an initiative is expected of the Slovenian Research Agency, as a financier to numerous studies carried out by Slovenian scientists, to publish research in the form of articles, such as e.g. Open Access (OA). Examples in this area are the two largest financiers of research in the field of medicine: the American National Institute of Health and the British Wellcome Trust, which require from scientists that a version of their research is available in OA. This approach reliably contributes to promoting public access to publications and the faster flow of information and knowledge to other scientists in electronic form. Finally, it also affects the transparency of fund usage for the researchers.

In Slovenia, the initiative for open access to data was presented very late, in 2009. To this day (October 2011), there still has not been any significant shift in the right direction. Since the storage of publications and data from publicly funded research in open access repositories is not required by funding bodies or by research institutes, only a very small portion of publications from Slovenian researchers is openly accessible via the World Wide Web. Consequently, Slovenia and its researchers do not share in the proven benefits of open access to publications and data: the country in terms of better utilisation of public resources,

rapid development of science and greater scientific visibility, while researchers in terms of greater visibility and impact of publications. Slovenia is among the countries with poor knowledge of open access and insufficiently developed (actually non-existent) network of internationally compatible institutional repositories. Various institutions in Slovenia issue over 30 open journals, recorded in the Directory Open Access Journals. Activities continue and in October 2011, in the spirit of better integration and openness, a seminar was organised, where an implementation plan for a portal for scientific and literary journals was presented. Currently it is too early to record the results of this activity, hopefully the fears that it will never develop further than the implementation plan are unfounded, and this activity will be realised. Yet there is interest and initiative from state institutions for regulation in this area, which could mean a step in the right direction towards greater openness of publications, and consequently, the greater visibility and recognition of Slovenian scientists both at home and abroad.

6. References

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Japan's University Education in Social Sciences and Humanities Under Globalization

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1. Introduction

Japanese society is currently facing high pressure with the structural change of global economics and politics. In 2010, Japan slipped from the 2nd to 3rd in terms of Gross Domestic Product (GDP), replaced by China. In 2011, the biggest earthquake and tsunami in recorded history to hit the Eastern part of this country took place, and was followed by the accident at the Fukushima Daiichi Nuclear Power Plant, which is expected to result in long term damage. Based on its strong social capital, most of the country had already returned to a usual life by the end of 2011. However, the cost for the recovery is adding significant pressure to the national budget, which is already burdened by a huge debt of more than 200% of its GDP. Faced also with the on-going ageing population phenomena, it is a necessity for Japan to strengthen its linkage with neighbouring countries, most of which are recognized as emerging economies.

Under these circumstances, the Japanese higher education system requires drastic change. On the 21st of November, 2011, the Japanese government implemented a policy review on university reform, and opened up all the discussion and results through an internet-based web-TV system. In the beginning of the discussion, a result of a public opinion poll by Asahi Shimbun was introduced. The data indicated that 63% of the respondents did not think that Japanese universities could foster globally viable human resources, and 64% did not think that Japanese universities could foster human resources required by the industry and society. At the same time, the result of the university rankings 2011/2012 by *Times Higher Education* was also introduced as grounds for questioning the international viability of Japanese universities. In that table, only two out of 780 Japanese universities (the University of Tokyo and Kyoto University) are ranked within the top 100. During the session, social sciences and humanities were treated as a weak point in the international recognition of Japanese university education and research.

Education and research activities in the social sciences, and most especially in the humanities, are by nature highly imbedded in the context of a national language. Except for some specialized academic fields, such as economics and international relationships, faculty members have been trained primarily through post-graduate education in Japan. The main language in which their education and research is conducted is Japanese. Nonetheless, growing trends toward globalization are exerting increasing pressure to transform this linguistic tendency. After the financial crisis in 2008, industry started to request Japanese

universities to foster ‘global human resource’ with high-level communication skills in English and other foreign languages. To remain competitive with these international trends, Japanese universities are attempting to adapt to the new global environment.

In the effort to enhance the international viability of Japanese university education in this increasingly globalized arena, the role of quality assurance has become progressively more important. The ‘quality’ of Japanese higher education, especially in terms of teaching and learning (as opposed to research alone), has long been questioned by observers writing from both within and outside of the country (e.g., McVeigh, 2002; Kinmonth, 2005; Shibata, 2006). It is not sufficient to approach this issue solely from the viewpoint of policy formation, partly because consensus as to what the term ‘quality’ implies remains elusive (Vroeijenstijn, 1995). Although policy arguments related to the quality of higher education are frequently based on broad impressions formed by the general public, policy and institutional arrangements pertaining to quality assessment and assurance in higher education are best understood when governmental and university administrative processes are taken into consideration.

This article considers the latest initiatives in quality assessment and assurance of education and research activities in Japanese universities, focusing on those systems and procedures having direct bearing on the social sciences and humanities. First, the uncertainty of the position of the social sciences and humanities in quality assessment and assurance in Japanese higher education is introduced, focusing on those social and policy contexts in which academics in social sciences and humanities have been involved. Second, the recent development of the quality assessment and assurance system (and other initiatives for improving the quality of Japanese higher education) is outlined. Third, the author provides the overarching rationale for assessing the quality of research, concentrating on the endeavour of achieving international recognition. Finally, the author points out the particular challenges facing the social sciences and humanities under globalisation.

‘Quality assessment’ is usually regarded as a tool for assessing performance of public institutions under the policy framework of new public management. On the other hand, ‘quality assurance’ is also a policy tool for assuring minimum standards of higher education services provided by national, local public, and private higher education institutions under the official recognition of the national government. As of 2011, Japan had 86 national, 95 local-public, and 599 private universities. While acknowledging the efforts of all national, local, and private higher education institutions, the assumptions and conclusions of this article apply mainly to the national university sector. Given their quantitative significance, especially in the field of social sciences and humanities, the author recognizes that private institutions are playing a major role in Japanese higher education.

In 2004, the national government introduced a corporate-style governance system into national universities. This was accompanied by a new evaluation scheme, which was implemented through a collaborative effort by a government committee and a national agency, the National Institution for Academic Degrees and University Evaluation (NIAD-UE). Most local public universities operated by prefectures and cities have also adopted corporate-style governance, and they face additional pressure from local assemblies to engage in formal performance assessments. In addition, since 2004, the Japanese government has required seven-year, cyclical ‘certified evaluations’ (accreditation) for all national, local public, and private universities and colleges. This certified evaluation, which is implemented at the institutional level, applies to both new and evolving forms of

professional post-graduate education programs. Project-based funding schemes, such as the 'Centres of Excellence (COEs)' in research and 'Good Practices,' which are found in various other education programs, are regarded as indirect forms of performance assessment. The Global 30 project, a governmental funding program that support core institutions for providing globally competitive education from 2009, is having a noted impact on the internationalization of top universities.

2. Context of quality assessment and assurance in Japanese higher education

The position of the social sciences and humanities in quality assessment and assurance in higher education is uncertain. Most methodological debates for quality assessment, especially those regarding research activities not only in Japan but all over the world, tend to focus more on the fields of engineering, medicine, and the natural sciences. At least four reasons for this focus may be discerned. First, as all countries are inevitably involved in the knowledge economy, it is believed that science and technology—and especially those departments with direct links to industry—are worth investing in to promote national competitiveness in the global economy (Altbach & Balan, 2007). Second, the usage of quantitative data such as publication numbers and citations is widely accepted in engineering, medicine, and the natural sciences, based on the worldwide development of publication databases and online journals (Leydesdorff, 2001). Third, most natural scientists and engineers feel that the science community is universal: that it is inseparable by national or cultural borders. Approximately 80% of publications originating from top-level Japanese universities, and 94% of those from French universities, are written in the English language in the natural science fields (Honda & Keii, 2004). Finally, the amount of public expenditure and investment from industry that is allocated to the natural and medical sciences and engineering fields is proportionally large. Accordingly, in light of this heavy national investment, institutional claims to 'world class' status and quality assessments to demonstrate efficiency and accountability are inevitably scrutinized by the general public (Yonezawa, 2003).

On the other hand, most social science and humanities fields (excluding those such as economics and business) in highly populated, non-English speaking economies like Japan have been highly protected from international competition. Despite recent, remarkable advances in translation and interpretation technology, language and cultural barriers in academic dialogue through publication and conference presentation continue to represent a great obstacle to the advancement of meaningful international exchange in most social science fields. Moreover, worldwide publication databases in social sciences and humanities (excepting those related to economics) that cover only English publications are not recognized as reliable indicators of research performance, again because of language barriers and the limited number of publications in respective social science fields. Thirdly, the amount of public expenditure for social science and humanities research is small relative to that awarded to the natural sciences, with the former increasingly dependent on the private sector contributions, tuition fees, and consultancy work (Liu & Cheng, 2007).

However, under increasing pressure to demonstrate public accountability in university activities, academics in the social sciences and humanities have also become engaged in various quality assessment procedures, further contributing to the already intense market competition to attract students and external resources for research, and to establish consultancy relationships.

It is important to consider the particular significance of quality assessment and assurance to the social science and humanities fields in Japanese universities. First, academics in social sciences and humanities are obviously making a key contribution to human resource development as well as research. Full-time faculty members in the social sciences and humanities comprise 27.6% of all full-time academic staff at Japanese universities (MEXT, 2007). Considering the quantitative significance of the number of students in the social sciences and humanities stated as a share of total student bodies—49.2% in undergraduate, 36.5% in post graduate programmes—this would appear to represent a considerable contribution indeed (MEXT, 2011).

Fundamental problems related to the internationalisation of non-English speaking academic communities are also more visible in the social sciences and humanities. Teichler (1999) described the internationalisation of higher education in developed, non-English speaking countries with strong national identities such as France and Japan as ‘internationalisation in two arenas’. In the case of Japan, universities are faced with internationalization issues in (1) expanding the international influence of its education and research in the Japanese language, as well as (2) helping to adjust its domestic academic community to English-based, international academic dialogue. In terms of publication and promotion, Japanese academics continue to be subject to the forces of inherent customs, rules, and values quite different from those of English speaking countries (Eades, 2000; 2001; 2004). In light of rapidly increasing pressure related to the globalisation of the academic community, as well as the society in which they live, academics in social sciences and humanities in Japan face the dilemma of pursuing two opposing courses to reach the goals of domestic and international prestige in research, and sometimes also in education. Here, quality issues for academics for social sciences and humanities are inevitably linked with the issue of internationalisation.

3. Recent developments in quality assessment and assurance in Japanese higher education

The history of quality assessment and assurance in Japanese universities begins with the establishment of the Japan University Accreditation Association (JUAA, or *Daigaku Kijun Kyokai*) in 1947, which was modelled after the US accreditation system. The JUAA defines itself as a ‘voluntary’ association through the initiatives of universities, and its Board of Trustees and Auditors is comprised of university representatives. In reality, however, it is well known that JUAA was established under the initiative of the US military authority that occupied Japan from 1945 to 1950, and aimed at depriving the *Monbusho* (Ministry of Education) of control over universities (Tsuchimochi, 1993). Therefore, the mission of JUAA at that time was to place importance on autonomous quality assurance and improvement as initiated by the universities themselves. Under the social confusion of the immediate post-war period, however, most newly-established universities, and even older institutions with a pre-war history, faced a significant lack of human and physical resources to meet standards set by JUAA.

In 1956, the Ministry of Education initiated its own governmental authorization procedure based on its Standards for the Establishment of Universities (Kimura, Yonezawa, & Ohmori, 2004). JUAA continued its voluntary-based accreditation scheme until the beginning of the 1990s, while quality assessment was implemented only once with each institution as a condition for obtaining membership in the association (Baba & Hayata, 1997). While governmental authorization and standards were considerably strict and detailed, there was

no effective system to monitor quality once universities and their programmes were authorized (MEXT Higher Education Bureau, 2006).

In short, the main concern in terms of 'quality' up until the 1980s had been the maintenance of minimum standards to qualify as 'universities' that were recognized by 'peers' of existing institutions both inside and outside of Japan. Continuous 'over-demand' for university enrolment led to a situation whereby the status of 'universities' was highly protected not by the quality of research and educational activities, but by limited enrolment opportunity. Dore (1997) characterized this era of highly competitive entrance examination procedures and inflated university prestige as 'Diploma Disease'. Despite this, industry had not yet come to rely on the quality of university educational programmes in general (Yonezawa & Kosugi, 2006). Former president of the electronics giant, Sony, Akio Morita, wrote a critical argument that Japanese higher education and schooling are useless, representing the voice of Japanese industry, which had come to rely on high level, in-house training (Morita, 1987).

By the 1980s, and the culmination of Japan's 'bubble economy', the trend of policy arguments had completely changed from 'welfare state policy' to 'neo-liberalism policy', partly influenced by international trends in the US and Europe, which in this period were experiencing economic depression after the oil shocks of the early 1970s.

The European example is largely credited for having activated the 'accountability' debate in Higher Education. Neave (1988; 1998), utilising his term 'evaluative state', noted that (Western) European countries started to introduce external quality assessment systems and forms of institutional management autonomy to higher education as new and indirect means for state governments to control universities. These European initiatives and the general discussion of neo-liberal arguments applied to the Education fields, activated debate in Japan over university evaluation. In the UK, before 1992, the basic university authorisation process assumed the form of 'Charters' which were directly granted by the King or Queen; however, an effective system to assess the quality of education and research on a regular basis was lacking. Near the end of the 1980s, new quality assessment initiatives in the UK, France, and the Netherlands were spread throughout Western Europe during the 1990s, and all over the world during 2000s. However, as of the early part of the 1990s, opinion leaders in Japan were arguing that the nation should follow the US non-governmental, voluntary-based cyclical accreditation model rather than prevailing European examples.

As Neave (1988) suggested, the process of introducing quality assessment and evaluation as a new tool of indirect control by the nation-state tends to be accompanied by the deregulation of university standards set by governments, with the aim of strengthening the management capacity of higher education institutions. In 1991, the Standards for University Establishment were drastically simplified, in order to give more flexibility, or room, for innovation in higher education programmes through initiatives of respective governments. As part of this streamlining effort, the government now required that universities and colleges make efforts towards self-monitoring and self-evaluation in order to demonstrate public accountability and foster the management capacity of universities (Kitamura, 1997). However, the governmental arrangement of an external or third-party evaluation system was not introduced at this time, and evaluation was left to volunteer-based initiatives of universities. Here, JUAA was expected to take a more active role as an external quality assessment body; accordingly, the organization started a re-accreditation process of existing members. By 1997, more than 80% of

universities had implemented some form of standardized self-monitoring and evaluation (Shimizu, Baba, and Shimada, 2000; Yonezawa, 2002).

In reality, under the economic prosperity of the 1990s, the pressure on Japanese universities to show accountability was not as imminent as the pressure on those in some Western European countries such as the Netherlands and the UK. However, from the mid-1990s, after the Japanese economy entered into a serious economic recession, pressure on national universities to implement administrative reform strengthened. Aiming for a drastic reduction of the number of national civil servants and the national budget, prominent economists, as well as officials of the Ministry of Finance (MOF), started to argue for the possible privatisation of national universities. Although this privatisation was ultimately not realized, faced with strong resistance from the national universities, pressure to show accountability became much stronger than before. In order to accelerate administrative reform within the national university system, the University Council (*Daigaku Shingi Kai*), the ministerial advisory body for university policies, recommended the introduction of 'third party evaluation' to assess institutional performance, and that the results of these assessments be considered in deciding national university budgets.

Based on the above recommendations of University Council, the National Institution for Academic Degrees and University Evaluation (NIAD-UE: *Daigaku Hyoka Gakui Juyo Kiko*) began conducting third party evaluations, first as pilot schemes with a limited number of participating institutions appointed by the Ministry of Education, Culture, Sports, and Technology (MEXT: *Monbu Kagaku Sho*). This pilot university evaluation program was implemented from 2000 to 2003, to (1) evaluate all national universities according to selected themes, such as international linkages and social contributions, (2) evaluate education activities in all fields, and (3) evaluate research activities in all fields.

In 2004, national universities introduced a corporate-style governance scheme with medium-term (six year) goals and plans (Hirowatari, 2000; Oba, 2007). In addition to their present obligation to submit annual reports, NIAD-UE will assess the teaching and research performance of these institutions every six years and submit results to the National University Corporation Evaluation Committee (NUCEC, *Kokuritsu Daigaku Hojin Hyoka linkai*), a subcommittee within MEXT that evaluates mainly the managerial aspects of national university corporations. The NUCEC will publish its evaluation report as informed by the results of NIAD-UE's quality assessment. The results of the evaluation are to be considered by MEXT, and utilized for budgetary purposes in subsequent six year cycles. As previously mentioned, many local public universities were also transformed into independent administrative corporations under the supervision of local governments. These local governments sometimes require similar external evaluation of their own universities: for example, certified evaluation by JUAA, NIAD-UE, or JIHEE.

As a part of the third-party evaluation scheme, 'certified evaluation' (accreditation) became compulsory for all national, local-public, and private universities, junior colleges, or colleges of technology from 2004. Certified evaluation consists of (1) institutional accreditation and (2) accreditation of professional post-graduate programmes (MEXT Higher Education Bureau, 2006). Adding to JUAA and NIAD-UE, the Japan Institution for Higher Education Evaluation (JIHEE: *Nihon Koto Kyoiku Hyoka Kiko*) was established by the Association of Private University of Japan (APUJ: *Nihon Shiritsu Daigaku Kyokai*) to implement certified evaluation mainly for private member universities.

4. Means and objectives of assessing the quality of teaching and learning

Teaching and learning are at the core of the quality assessment of university activities. However, methodologies of assessing the quality of these functions are still in the primary stages of development. In general, any assessment scheme of teaching and learning will assess the input, process, output (direct achievements), and outcomes (indirect and long-term effects) of teaching and learning. Each university, and, in many cases, each programme, has different objectives or missions. As part of the admissions process, institutions or programmes should disseminate a clear mission statement detailing their teaching and learning activities among applicants and newly enrolled students. Curriculum and learning support systems should be consistent with those objectives, and outcomes should be monitored as the basis for constructive feedback for better teaching and learning. However, accurately assessing the quality of output and outcomes is very difficult, especially if their relationship with the initial teaching and learning objectives is uncertain. In the US and Europe, retention and pass rates could serve as clear performance indicators. However, in the Japanese case, retention rates are so high (around 90%), and the academic performance within the enrolment level so diverse that these can hardly serve as 'objective' indicators by which to assess output and outcomes. This is mainly due to the drastic transformation of the Japanese higher education market from a long-term, over-demand condition until the beginning of 1990s, to the present over-supply condition. While high retention rates used to be combined with the assurance of minimum academic achievement at the enrolment in the universities, this is no longer the case.

There are mainly two types of quality assessment: (1) *threshold type* assessment, aimed at assuring minimum standards; and (2) *quality or performance* assessment, used for rating or ranking purposes. Accreditations and university evaluation standards are examples of the former type, and the National University Corporation Evaluation Plan is an example of the latter type.

Certified Evaluation (2004 - present). Certified Evaluation is a third-party process that could be understood as a form of accreditation. The main objectives of certified evaluation are quality assurance, quality improvement, and accountability of universities and colleges at both the institutional and programme levels. Programme-level certified evaluation is required only for professional post-graduate programmes that have recently been established and are separate from traditional, academic-oriented post-graduate programmes. Certified evaluation is implemented by third-party evaluation organisations, which are certified by the government through approval by an advisory committee under published guidelines requiring transparency and fairness in the evaluation process.

Universities and colleges choose from among different 'certified' evaluation organisations, and submit findings of the quality assessment process once every seven years for institutional evaluation, and once every five years for professional post-graduate programmes. As for the institutional-level certified evaluation, JUAA, NIAD-UE, and JIHEE have already published initial evaluation reports of almost all universities and colleges by 2011. Some did not meet the requested standards, and underwent additional monitoring or re-submission. As for the certified evaluation of professional post-graduate programmes, evaluation organizations in prospective fields have been certified. Certified evaluation organisations publish the standards and processes of evaluation in manuals for both reviewers and the higher education institutions being reviewed. Based on these guidelines, universities and colleges are required to submit self-evaluation reports. The review committee reads self-evaluation reports,

implements site visits, and publishes final observations. Universities and colleges have an opportunity to make objections, to which the certified evaluation organisations respond. Each certified evaluation organisation exhibits some uniqueness in their guidelines and evaluation processes, although general characteristics are almost the same under the government-set guidelines for certification. All certified evaluation organisations attempt to respect the missions and goals of individual universities and colleges, while they also try to assure that minimum standards are present in each consideration.

National University Corporation Evaluation (Plan). The incorporation of national universities was presented and accepted as a tool for assuring institutional autonomy for university-led reforms. However, in the process of implementing the National University Corporation Act and related regulatory schemes, it came to light that the National University Corporation Scheme would be implemented as an application of the Independent Administrative Corporation (IACs: *Dokuritsu Gyosei Hojin*) Scheme, which was applied to organisations implementing government public services. The purpose of IAC quality assessment is basically to promote the effective use of public resources by assessing performance as well as accountability. Therefore, from a governmental point of view, the quality assessment of any national university corporation should be designed as a type of performance assessment to determine budgetary allocations and be persuasive enough for the Ministry of General Affairs (*Somusho*), Ministry of Finance, and the general public.

In other words, medium-term goals and purposes are regarded as a contract between ‘autonomous’ universities and the government. Alternatively, they might be viewed by universities as declarations of the corporate strategies of national university corporations, or by the government as achievement plans of public service organisations. These two perspectives consistently arise in the dialogue concerning the design and direction of the National University Corporation Evaluation Plan. Philosophies and mission developed by each university are stated and written within the recommendation reports.

The evaluation of educational activities will be implemented as follows. Each national university faculty or school is first required to submit the reports on its educational activities. Next, evaluation committees set up by prospective disciplines assess the submitted basic data and give ratings based on ‘the system for implementing educational activities’, ‘educational contents’, ‘educational methods’, ‘achievement of learning’, and ‘students’ careers after graduation’. The committees then rate the degree of quality improvement in educational activities based on concrete examples of educational reforms. If necessary, the committees may implement site visits to universities. In January, 2011, the first quality assessment report by NIAD-UE was submitted to the National University Corporation Evaluation Committee of the MEXT. All the reports are published with ratings through the internet.

Adding to these quality assessment systems is the non-governmental scheme on developing **Reference Benchmarks of University Education** by the Science Council of Japan (SCJ). The practice of establishing benchmarks for reference in university education in prospective disciplines was first implemented in the UK. In the UK, the Quality Assurance Agency (QAA) had previously implemented subject level quality assessment in university education. However, based on strong opposition by the universities, this scheme was terminated in 2001 (QAA 2003). Instead, the QAA started a project to establish benchmarks for reference (‘subject benchmarking’) in prospective subjects such as history and physics. In this model, each university has a responsibility to set up an internal quality assurance system to assure the quality of its education with reference to the benchmarks. Following

this model, SCJ started to establish such reference benchmarks for 30 disciplines in 2010 (Science Council of Japan, 2010).

5. Means and objectives of assessing the quality of research

Quality assessment of research activities in Japanese universities is a widely and actively debated subject among university faculty members, staff, and students alike. Especially in fields with well-developed citation databases, bibliometrics, and other quantitative approaches for assessing research, activity and quality are often discussed. A citation database of Japanese research papers has also been developed (Negishi, Sun, & Shigi, 2004). International publication databases are commonly used in the field of economics, and the Social Sciences Citation Index is also becoming popular. However, by their very nature, most of the social sciences and humanities are not well suited to these quantitative approaches, and the peer evaluation system is regarded as the only choice when it comes to reliable assessment.

Some social science and humanity fields tend to face difficulty in arriving at a consensus among reviewers with different academic or, sometimes, political inclinations. Most articles in the social sciences in Japan are written in Japanese, and therefore assessors are almost always limited to Japanese authors, or others who are committed deeply to the Japanese academic community.

The impact of the '21st Century Centres of Excellence' programme and the following 'Global Centres of Excellence' programme on the social sciences and humanities in Japan have been significant both at the national and the institutional-level selection process. Eades (2005) argues that human science projects of COE faced difficulty in demonstrating research performance at the interim stage of review, receiving pressure from natural science fields being assessed by 'international standards'. At the institutional level, the offices of university presidents were required to assemble and prioritize their research units prior to submitting COE proposals. Here, straightforward discussion to assess the quality of research between and among different fields often took place, in order to determine priority among programs and projects (for example, between a research project in social theory and another in chemical engineering). Again, at least among top national universities, it is not easy for research groups from the humanities and social sciences to be given high priority. Historically, offices of university presidents did not possess accurate information on academic performance among different faculties and departments. The internal selection process of such projects now gives presidents' offices greater power to access this information for prioritizing and other management purposes.

It is worth recalling that the 21st Century COE scheme represented the refinement of a previous plan to foster the 'top 30 world-class research universities' (Yonezawa, 2003). However, the results of this earlier initiative merely served to reproduce, and even reinforce, the existing domestic hierarchical order among Japanese universities, based on domestically implemented 'peer reviews' conducted in the Japanese language (Yonezawa, 2007). The Global COE programme, which replaced the 21st Century COE programme in 2007, introduced peer review conducted at least in part in the English language. Also in 2007, the Japan Society for the Promotion of Science (JSPS: Research Council of the Japanese government) initiated a new programme called the 'World Premier International Research Centre Programme' for investing more than the COE programme into a highly limited number of research projects for the coming 10 to 15 years. Under this programme, a full-

scale international peer review, based both in Japanese and English, was implemented. This addition of bilingual peer review did not lead to any project in humanities and social sciences being selected. From 2011, a new funding program called 'Leading Doctoral Programme' started to support launching internationally competitive doctoral programs. However, the assessment procedure was implemented only in Japanese, and only one of the 21 selected programmes was from the social sciences: 'The Program for Cross-Border Legal Institution Design' of Nagoya University.

Within the National University Corporation Evaluation Plan, NIAD-UE assessed the quality-level and quality-improvement of research activities, and the final result was published in 2011. Each faculty or school of national universities was required to submit a 'report on excellent research achievements which represent schools and faculties' and a 'report on strategically-focused research achievements in the field' to committees of NIAD-UE. Committees organised by respective fields then analysed and assessed the reports, and implemented site visits if necessary. When deciding ratings, the original missions and purposes of each university are to be respected and taken into consideration. Attached to the Certified Evaluation scheme, NIAD-UE started optional services for the quality assessment of research activities mainly of local-public and private universities.

Especially in regards to the quality assessment of research activities, there is a widespread suspicion that reported research performance will be utilized for financial allocation. Although the research performance indicators did not have a significant impact on the financial allocation by the MEXT in the end (Yonezawa, 2011), the published assessment result became useful information in setting up a management and financial strategy at the university level.

6. Pressures for the globalization in social sciences and humanities

The impact of globalization has intensified over the last decade. Faced with the robust socio-economic development in East Asia and other regions, as well as substantial regional integration in Europe and ASEAN, Japanese society itself is at the crossroads. At the same time, experiencing a struggle for recovery from the disasters in March, 2011, Japanese universities have become more seriously committed to the networking and collaborative efforts both internally and internationally.

How to improve the quality of university education and research is still a highly controversial question, especially within the humanities and social sciences. In terms of pedagogical practice, a long tradition of teacher-centred instruction is now transformed into more student-centred learning styles. The University of Tokyo invited Michael Sandel from Harvard University to demonstrate interactive lectures, and the NHK, the public broadcast company, broadcast the lectures on TV in a series.

The government has also tried to promote the good practices of teaching improvement and faculty development activities through various incentive funds. 'Faculty developers', new professionals who are engaged in the teaching improvement activities, launched their own network in collaboration with their international community.

Market mechanisms may also have a strong influence in quality improvement in the social sciences. Students choose universities, at least in part, based on prestige, quality of services, rankings, and other similar status indicators. Employers have some preferences as to graduates of certain institutions, and the rankings of those employers are also provided to

the media. Particularly for less prestigious private universities facing applicant shortages, the impact of market mechanisms is significant (Doi, 2007; Yonezawa & Kim, 2008). However, as many observers have already pointed out, unpopular private universities are aiming solely to fill student seats, regardless of readiness for higher learning. This almost corrupt educational environment illustrates that market competition does not always assure the quality of university education (Kinmonth, 2005).

Here, the issue of university education became more widely recognized as an issue of human resource development. In 2007, the Ministry of Economics, Trade, and Industry (METI) published a report to request university education to provide basic skills necessary for the working life among the graduates (METI, 2007). In 2010, the METI developed another report to stress the necessity of fostering 'global human resources' (Global Human Resource Development Committee of the Industry-Academia Partnership for Human Resource Development, 2010). In their definition, global human resources should have (1) fundamental competencies for working persons, (2) communication ability in a foreign language (particularly in English, which is widely used globally), and (3) ability to understand and take advantage of different cultures. Following the report, *Keidanren* (Japan Business Federation) and the MEXT also published a proposal and report with similar themes (Keidanren, 2011, Sangaku Renkei niyoru Global Jinzai Ikusei Suishin Kaigi, 2011).

At the same time, the government, as well as universities, became aware of the importance of student exchange, as well as internalization at home through accepting international students. In 2008, the Japanese government started a plan to invite 300,000 international students by 2020. In 2010, the new government, led by the Democratic Party Japan (DPJ), added the policy plan to send 300,000 Japanese students abroad for fostering global human resources (Prime Minister of Japan and his Cabinet, 2010).

In 2009, 13 top comprehensive universities were selected in a project, 'Global 30', for supporting internationally viable university education (Yonezawa 2011). They launched degree programs in the English language both at undergraduate and graduate levels. They are also encouraged to hire international faculty members for promoting quality education in the English language for students coming from all over the world. Nagoya University, one of the selected top national universities offers such programs in social sciences, natural sciences, and engineering. Interestingly, the social sciences program is most popular among the international applicants, probably because the attractiveness to study in Japan is much more connected with the attractiveness of Japanese society itself, at least at the undergraduate level.

Student exchanges, including double degree programs with foreign partner universities, are also becoming popular. In order to assure the quality of those joint education programs with foreign universities, the MEXT set up a guideline to recommend careful design of curricula through intensive discussion with partner universities (Central Council for Education Working Group on the Promotion of Globalizing Universities, 2010). At the same time, the MEXT launched a programme, 'Re-Inventing Japan Project', for promoting student exchange under partnership with universities in the US, China, South Korea, and other countries. This program is divided into Type A (partnership mainly with China, South Korea and South East Asian Countries) and Type B (partnership mainly with US and other western countries). Nine out of the 13 selected programs in Type A, and six out of the 12 selected programs in 2011 could be categorised as the programmes in the field of social sciences and humanities.

It is obvious that social sciences and humanities in general have been in a disadvantageous position to partake in the money game in on-going quality assessment and assurance policies in higher education. However, the pressures of globalization, especially in terms of human resource development, are providing a great opportunity for social sciences and humanities to revitalize themselves, not least by internationalizing their profile.

Academics and experts in social sciences and humanities have a great responsibility for the future direction of Japanese higher education policy and the future destination of the social sciences and humanities in Japan. What social sciences and humanities can contribute to society should be demonstrated through autonomous peer initiative, including the formulation of a quality assessment scheme, which could serve as a good model for other fields. At the same time, both international communities and the Japanese general public are becoming intolerant of further delays in increasing international competitiveness.

7. Notice

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ICT, Learning Objects and Activity Theory

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1. Introduction

Exploration of “human agentic consciousness”, “private realms of subjects” and “reflexive agents” in López-Varela (2010, p. 125) incorporate a dualism of subjects (“producers”) and objects (“consumers”) into the framework. However, focus (ibid., p. 127) on “betweenness” and computer-mediated communication enable for analysis of intersubjectivity transcending individual, cultural-historical and economic contexts. In a similar approach, Garrison (2001, p. 276) argues against dialectic thinking based on a list of dualisms first published in Dewey (1952/1989, p. 408) “The material and spiritual, the physical and the mental or psychological; body and mind; experience and reason; sense and intellect, appetitive desire and will; subjective and objective, individual and social; inner and outer.” In responding to a philosophical approach to characterizing the functioning of the human brain or how we think, learn and memorize, Roth (2007, p. 40) acknowledges the relation between individual initiative and collective influences. Kaptelinin and Nardi (2006, p. 11) outlines agency versus structure for ICT environments, saying “activity theory has always had a strong notion of the individual, while at the same time understanding and emphasizing the importance of a socio-cultural matrix within which individuals develop.” [So, emphasis] of this text [is on...] a combination of individual and collective influences on human behavior. The approach provides a productive venue for describing and explaining how people think, learn and know.

Regardless of approach there seems to be creative dynamics at work, because for any human encounter there is transaction between participants. Wells (2007, p. 165) labels such meetings an “occurrence of a joint activity in which multiple participants are collaboratively involved.” It is intriguing to find that people seem to struggle with ongoing dilemmas and recurring contradictions without considering issues of agency and systems thinking. Also, conceptual analyses suggest that by agency we understand that individuals are free and willing to act on impressions, to take action, support activities and (re)act on other people’s behavior. Our ability to act on personal needs and motives so as to control actions in Self and Other is a specific human ability, be it informed, planned or spontaneous. Furthermore the general idea for a human need to exercise agency is to produce an effect according to an original plan or an adjusted intention. On the other hand people seem to continuously build social systems in their minds whenever they listen to, calculate, process and respond to events, situations and other people, be it in physical, virtual or social worlds. Thus, any such social system – a football team, an army or an orchestra – is a community of practitioners with people relating to each other with a shared understanding of the limits of the system,

what it takes to cross its borders, what the consequences would be, what keeps the community going and what separates insiders from outsiders.

2. Problem statement and purpose of research

Individual and collective input to shared activities operate differently, depending on the participants' behavior. They act from a self-managed and self-conscious low-level of consciousness, attention and intention or from a high level of professional thinking. An additional purpose would be to explore the potential of activity theory concepts for teaching and learning, including verbal exchanges mediated by modern technology, i.e. sessions on a computer-based platform enabling for a study into group processes defined as a vehicle for higher order professional thinking. By engaging in verbal co-construction (co-operation, communication, co-ordination) of a collectively processed learning object (on how to use ICT), teachers seem to either learn/identify/explore a sought object or to remain at a low level of consciousness merely supplying requested curricular data on a given subject. The result of their initiatives depends on how the group interacts, who takes the lead, who is attentive and who drops out from the process. It seems as if those who struggle the most contribute by a self-conscious input of menial information at the level of *object construction*. They dutifully complete each step of an interactive process. Those who contribute to productive group interactions generate professional thinking by the way they *instantiate the object* of inquiry. They initiate interactions by the way they act out verbal input for [raising] the group's [level ...] of knowledge during object construction. During the process of transformation from merely interacting to actual transformation of a shared learning object there seems to be a delicate balancing of isolated individual and collectively shared needs going on.

It is a relevant mission to study if it is possible to apply general activity theory as an analytic resource for describing the catalyst mechanisms that inspire and/or sustain an emerging professional culture during e.g. ICT mediated sessions. On this note, Nardi (2007, p. 6) says Raeithel (1996) explained co-construction of a shared object like a series of verbal exchanges to mean "re-definition of the object of collective activity." Even today Engeström's (1987) original concept of co-construction of an object needs to be modified. Kaptelinin and Nardi (2006) say co-construction equals the traditional process of finding out what a subject expects of other subjects (during object construction) plus exploration of how agents go about realizing other people's expectations (during object instantiation).

Adding to the above, Nardi (1996, p. 69) introduces the problem of assessing individual and collective influences to human development in an ICT context asking "What are the relations between artifacts, individuals, and the social groups to which they belong?" Until now personal chemistry, compatibility of goals, interests or ambitions have mystified what may happen when people cooperate in order to form rewarding learning activities. Concepts like luck, magic or fortune fail to provide an explanatory basis for any theory or method for exploring the development of human activities. It is useful to put into perspective how the activities start off, change, develop and die out. The problem for research is to find mutually excluding variables that inspire and/or sustain productive acts, actions and activities between people, more specifically oral and physical relation-building mechanisms that inspire individuals and social systems to communicate through a medium, a boundary object (Van Oers, 1998) or a designed space for interaction (Winograd, 1996).

The medium for this study is any “transformative artifact” or soft- and [hardware] working [together.] The approach provides an interactive context for the users and the researcher to share physical, social, emotional and cognitive experiences. Following Van Oers (1998, p. 137), most soft- and hardware combinations could/should be understood as “a result of a personal (mental) or social act of interpretation of an activity setting (contextualizing), trying to bring the determining factors under control.” In deciding if soft- and hardware plus routines is a process, an elaborate context or a tool (Ducheneaut and Bellotti, 2001), emphasis is on process, i.e. human interactions group dynamics, functioning teams or virtual communities.

For some time now researchers have been obsessed with a basic dichotomy, *subject* versus *object*. Their misguided focus has had a confusing effect on theory-making. Today people consider what constitutes a good life, effective learning and valid knowledge from a different perspective. Collectively, we assume that subject and object are interrelated, complementary but independent forms of being, i.e. human ways of relating to the world. In this text I demonstrate a “practical turn” towards cultural-historical (socio-cultural) influences on Self, personality and consciousness as they provide a developmental path. Conceptualizing of work/shared activity rather than individual reflection provides another way forward. On shared activity, Dewey (1916, p. 327) provides a synthesizing approach to the implied dichotomy between personal reflection and language systems “Overt action is demanded if the worth or validity of the reflective considerations is to be determined.” In this study I elaborate on Dewey’s (1953, p. 154) bold philosophical statement about what characterizes the human species “We are at root practical beings, beings engaged in exercise (to master nature; *comment by this author*). This practice constitutes at first both self and the world of reality. There is no distinction.” Before doing so, however, there is another aspect to consider.

For social, behavioral and organizational studies applies that researchers should clarify input, process, effect and feedback mechanisms affecting human thinking, behavior, values and attitudes. Such approaches relate to human-organizational influences, reflecting an ambition in the researcher to identify and analyze driving, balancing and regulative forces on individuals, material progress and human growth. Soon enough a number of terms appear in opposing rather than dialectical pairs. Find ten specific constructs complementing Dewey’s (1952/1989) contribution.

Singular/plural; I/we; person/people; private/public; Self/Other; individual/collective; one-off/system; intention (need-motive)/ activity (organization); agency/structure; psychological/social; entrepreneurial/administrative.

The way we use these concepts on isolated or shared human behavior respectively entails a different perspective for each reference. For example, Bourdieu (1977) employs *agency* and *structure* for specific purposes, a specific context and traditions.

In order to be able to assess the impact of individual versus collective input to verbal interactions, one purpose of research would be to track shifts in the situated activity (object construction) bringing higher order thinking into place. Another priority would be to analyze an advanced conception of the discourses context (object instantiation) during the crucial moments when changes occur. Approaching the problem in this way enables for research to elaborate a theory of agency and structure, assuming that changes come as the result of how subjects express (a) self-conception and self-management in a context of

supplying factual information and (b) the effect of professional thinking which expands the participants' knowledge about computer-mediated design and learning.

3. Previous research on agency and organization

Lev Vygotsky (1987) is an authoritative proponent of a synthesizing approach to agency and systems thinking. He suggested agency should be categorized by means of 'scaffolding', e.g. in mother-child relations. In doing so the researcher enhances sought processes and outcomes of contextualized learning, for example by studying how mother and child solve a jig-saw puzzle. Peter Senge (1990), a contemporary proponent of personal mastery in organizations, suggests management should help employees in their thinking about the company in terms of human relations, social system or learning organization. For current purposes, it is a relevant question to ask: what is the position of organization theory? Rigg (2008, p. 105) argues for both-and-understanding of relations between *I* and *we*, criticizing the *we-approach* because: "organizational or systemic capacity rarely goes beyond the notion of peers". Rigg (*ibid*, p. 106) introduces the concept multi-agency partnerships ("collective subject" in Enerstvedt, 1977) but without clarifying the relations of such partnerships to either *I* or *we*. Vince (2004) provides another contribution to understanding organization theory, defining learning among employees as a collective process for inquiry into established practices. Hawkins and Chesterman (2004) praise intra-organizational *we*-teams compared to mixed *I*-centered groups. *We*-concepts denote patterns of social interaction. For example, Fletcher (1997, p. 94) says an organization is a discourses framework of vaguely defined "interactively shared meanings".

Miettinen (1999) presents action network theory (ANT) as an extreme form of theorizing about integration of human subjects and material objects. The major proponent of the theory, Latour (1994), says people and tools are "trapped" in an all-encompassing psycho-material network without natural boundaries, or social relations for that sake, between objects and actors. Leaving the extremes behind, Lee (1985, p. 68) notes that Vygotsky and Marx (1990) had several things in common regarding objects and people. They emphasize situated activity rather than individual reflective acts. Their primarily shared idea is "showing what role or effect an item has in some system of which it is part." In a politically relevant statement, on individual and society Vygotsky (2004, p. 343) says "We cannot master the truth about personality and personality itself so long as mankind has not mastered the truth about society and society itself." Vygotsky (1998) holds that description and analysis should start with systems thinking because just like Engeström (1987) and Leontev (1978) he argues that the object of research is the system first and the individual second. He outlined intricate relationships between man and the world, suggesting a connection between the two for analysis of higher mental functions like generalization, abstraction and learning. Still, in another text Vygotsky (1998) opts for the crucial impact on human development by collective activity systems.

At first every higher form of behavior is assimilated by the child exclusively from the external aspect. [...] It is only due to the fact other people fill the natural form of behavior with a certain social content, for others rather than for the child himself, that it acquires the significance of a higher function. Finally, in the process of a long development, the child becomes conscious of the structure of this function and begins to control his own internal operations and to direct them. (p. 171)

In a comment to the above, Scribner (1985, p. 123) positions Vygotsky in the realm of systems thinking by referring to people's need to "search for specifically human behavior in history." There is a basic human need to relate to history. From a perspective of short human history, ethno-methodologists like Garfinkel (1967) study everyday activities and structured, orderly social behavior at length and in detail. But they lose out on cultural-historical influences. Participatory learning theory (Lave & Wenger 1991; Rogoff, 1990) represents another school, over-emphasizing the significance of context, collaboration, intersubjectivity and discourse. Such "participatory learning theory" could help explore communications among members of narrowly defined groups in a limited ICT setting or an expansive Facebook-context. In clarifying complex relations between ecological humanity, contextual learning, systems thinking and agency, Bronfenbrenner (1970) offers a holistic approach to understanding what human activity systems are. Carefully defined analysis at micro-, meso-, exo- and macro-levels forms a resourceful basis for investigation of family, children's networks, institutionalized schooling and culturally evolving value systems.

Engeström and Miettinen (1999, p. 9) follow the original focus and lineage of general activity theory. They define contextualized phenomena where people work together towards a shared goal in order to form a shared activity, or "object-oriented, collective and culturally mediated activity, or activity system." In supporting an approach so attached to the idea of a collective subject, proponents of Computer Supported Collaborative Work (Nardi, 1996) says "collective activity" is an analytical tool for understanding emerging contradictions during cooperative work. Today similar theories refer to virtual communities of practice, social media, virtual teams or net-based societies.

It is comparatively easy to outline the dialectic differences between agency and structure by juxtaposing the constructs individual agency and collective subject(s). The reason is that a propositional antithesis to "collective culture" aims at promoting individual agency. Kaptelinin and Nardi (2006, p. 247-248) resolve the dichotomy by providing an enriching analytic potential of concepts related to agency, suggesting there is (a) need-based agency as in biological and social needs; (b) delegated agency for acting on someone's behalf; (c) conditional agency as when actions produce unintended effects. Specifications of agency bring us one step closer to understanding how the human species learn to relate to work activity, other people and the world.

Long before it became necessary to fine-tune the operational meaning of *agency*, any notion of humanity carried with it the idea of initiative, fostering, agency or intention. It is equally true that a single-minded materialistic approach to how the human mind functions form disconnected approaches as to how the world works in a more unique and general way for the human sciences. Hegelian (1904, p. 269) conceptions of the individual industry worker in the realm of Marxism reveal a self-centered view of man, of the new man: "If man saw [...] that whatever happens to him is only an outcome of himself, and that he only bears his own guilt, he would stand free." Marx (1990, p. 177) complements Hegel's description of modern man as an outcome of his own labor, saying (ibid, p. 271) man is "the architect of his own future with an ability to master the laws of his own formation." From a perspective of a general law governing man's historical development, people held the opinion that modern man must become a self-controlled agent of any line of development – an inspiration originating from Engels (1966, p. 302) statement: "The objective, external forces which have

hitherto dominated history will pass under the control of men themselves. It is only from this point that men, with full consciousness, will fashion their own history.”

In realizing the roots of Engels’ emphasis on individual within a group, Bruner (1987, p. 15) says Vygotsky effectively confronted concepts like freedom, necessity, agency and causality “because he [Vygotsky] was so dedicated to the concept of self-regulation.” Vygotsky himself (1997, p. 166) says: “[Individual] Thought plays the part of an advance guide of our behavior.” On relations between intentionality and mediation facilitated by studies into ICT, Kaptelinin and Nardi (2006, p. 10) take on a neutral stand, saying “*people act with technology, [...] as subjects in the world.*” continuing (ibid, p. 33) agency is: “an ability to act in the sense of *producing effects* and an [...] *ability and need to act*. There is, however, a risk of confusion between current trends in ICT and general activity theory because agency and intentionality are near synonymous concepts. On agency, Vygotsky (1986) outlines the characteristics of a stepwise process, in fact an advancement of intentionality comprising the individual mental steps preceding action. By referring to an example of how children become conscious of their intentions when they sketch a drawing, Vygotsky observed that at early age the child simply draws. Then the child labels the picture after drawing it. Finally the child makes up a plan before drawing. Miettinen (1999, p. 177) echoes Vygotsky’s example of intentionality, saying that if adults could only break their direct, spontaneous and instrumental relation to objects, they would be able to imagine, plan and visualize a different future. It is far from clear, however, how the suggested shift from one relation of a certain type to another relation with a different kind of (i) learning object or (ii) object of work would look like. Kuutti’s (1991) quick-fix proposal about how to understand agency and mediation suggests a middle way between confusion generated by unspecified influences between natural and social resources (context) and recurring cycles of personal initiative plus cooperation (activity). A minimal context for individual action appears by means of relating individual agency to organizational development.

3.1 Assessing the quality of research

One purpose of this study is to mediate between individual and collective extremes and another purpose is to provide a dialectic synthesis between individual agency and organizational structure. A close reading of Vygotsky (2004) verifies to a dualism in the history of past research. Many approaches to understanding conscious agency versus structured systems thinking reflect a harmful dualism between intentional Psychology and materialistic quantification, the former stressing needs, motives and agency and the latter emphasizing quantitative data and statistics.

Recurring misconceptions abound. In commenting on the relation between man and environment, Hodkinson, Biesta and James (2008, p. 33) say: “Any place where people act and interact has a learning culture, where learning of some type takes place.” Their (ibid, p. 34) rhetoric argument suggests “Cultures are (re)produced by individuals, just as individuals are (re)produced by cultures.” They (ibid, p. 30) claim that their objective is to develop a theoretical framework, but they confuse the relations between individual psychology and social control by aggregating to their theoretical basis neighboring, but fundamentally different, approaches like Billett (2008) on workplace learning, Vosniadou on representations or Bourdieu (1977) on philosophy. Their attempt (ibid, p. 30) at explaining

the characteristics of ICT cultures vs. providing a cultural historical account of learning “from a broadly situated socio-cultural perspective” turns into analysis of abstractions like expectation/motivation vs. need/motive (ibid p. 34). Also, the authors fail to clarify how theoretical development could emerge from resident relations between e.g. culture, behavior, context, process, objective or outcome. Without actually contributing to theoretical development on analysis of empirical data they (ibid., p. 37) quote Lave (1996, p. 162) saying “Researchers would have to explore each practice to understand what is being learned and how.” The authors corrupt their explicit mission to integrate individual agency and collective systems. It is hard to find an explicit link between their diverse list of items extracted from distantly related theories. Vygotsky (1987), on the other hand, provides a reflected and empirically verified statement about the operational relation between thought and action, i.e. intentional and structural conditions defined as context.

In subjecting to his will the process of his own reactions, man enters in this way into a substantially new relation with the environment, comes to a new functional exploitation of elements in the environment as stimuli-signs which he uses, depending on external means, and directs and controls his own behavior, controls himself from outside, compelling stimuli-signs to affect him, and elicits reactions he desires. (p. 63)

Yaroshevsky (1989, p. 80) compliments Vygotsky’s ambition to integrate a person’s unique life with the development of mankind perceived as a social system. In order to do so, the researcher must be able to weave “the individual’s brief life into the great age-long history of social being [combining] the macroscale of the life of the people down the ages and [...] the microscale of the individual’s routine contacts with his brethren.” Such a synthesizing approach is a valid design because people believe that consciousness is an individual quality. Vygotsky (1999) also argues that consciousness is in the social moment, on time and in place. Leontev (1978) is equally clear on the issue, stating that there is only activity defined as a relation between an agent (i.e. in his case a collective subject) and the object towards which the individual action is directed.. Leontev’s main concern is to explain relations between needs-motive-activity, a line of research beside the immediate purpose of this study. Sure enough, subjects and objects acquire characteristics/properties when human activities are enacted on/with/by individuals. Kaptelinin and Nardi (2006, p. 31) adopt a balanced transformational view of relations between people and technology, saying the purpose of activity theory is to “understand individual human beings, as well as the social entities they compose.” They (ibid, p. 37) conclude “A key factor of an individual’s success is the success or failure of the social entity [...] to which the individual belongs.” One could add: success of the social entity in achieving initiative, change, learning and development. I believe ICT contexts will prove helpful in explaining such processes. A shift is underway, going from self-contained psychological analyses toward an emerging focus on models including collaborative and communicating groups of people on social media.

In finding a solution to the harmful separation between influences of individual and/or collective co-construction of a learning object by means of general activity theory, Moll (1990, p. 1) says there is a “cognitive gap” between singular and collective extremes. Unfortunately recent research seems reluctant to clarify how individual input contributes to collective co-construction of meaning in digital environments. For example, Rydberg and Christiansen (2008, p. 209) argue that during interactive processes, the interlocutors participating in a *learner centered design* (Gifford & Enyedi; 1999) gradually feel “invited to

mimic” each other’s behavior, “spread the knowledge” or “formulate new rules”. Likewise, Levin and Wadswanly (2008, p. 234) say co-construction equals “cognitive transformation”, a definition merely blurring a limited aspect of the concept because co-construction of a learning object is a complex interactive process.

3.2 Mediating individual and collective influences

The concept object (of activity) serves as a means to bridge between agency and structure. Leaving the basics (subject, object and instrument) of activity theory behind, “relations” plus “object of activity” make up a comprehensive analytical framework. The reason is that - with an eye to individual consciousness about the existence of Self - Vygotsky (1994, p. 19) emphasizes interaction between person and environment, quoting Karl Marx: “My relationship to my environment [...] is my consciousness.” And as the title of Leontev’s (1978) main work *Activity, Consciousness and Personality* suggests, the first term is a precondition, the second is a process and the third is ultimate achievement of cooperation. Following Leontev’s trajectory on development of activity systems enabled by/enabling a “collective subject”, agency relates to systems thinking, almost like singularity relates to multiplicity.

So far quotes and comments emphasize agency as an impetus to development. But one would prefer an explanation with a focus on a transformational move from structured activity pushing forward in a learning curve towards agency. Galperin says (Arievitch, 2003, p. 279) it is necessary to analyze the “culturally constructed nature of mind without losing the aspect of individual psychological functioning.” It is, however, an unsolved problem (ibid, p. 281) how “mental, psychological emerges out of material, nonpsychological.” Another equally difficult suggestion to grasp points to the need to envision a transitional move between singularity and pluralism during shared activities. Galperin’s (ibid., p. 284) argument is that people “understand individual mental development as the gradual internalization and transformation of socially constructed shared activities.” By pointing to the object-relatedness of human activity, i.e. a collective object of activity, Galperin (ibid., p. 286) eliminates “the dualism of mental and material, external and internal processes.” A synthesizing solution would be Garrison’s (2001) response to Engeström and Miettinen’s (1999) exploration of Dewey’s interpretation of dual relations between internalization and externalization of objects/objectives. Garrison (ibid., p. 288) says “objects never lose their event quality” implying man’s work on material objects and people supply positive dialectic *resistance* rather than negative opposing *constraints*. So the ideal object of work is nothing like denial of the circumstances, it is rather an active search for agreement between partners, paradoxically a search for commitment to fight each other.

The quoted conceptions in Kaptelinin and Nardi (2006, p. 143) contribute to dichotomization between individual agency and structured organization. Other quotes suggest another way of synthesizing “object of activity” by means of ICT. Leontev’s (1978) psychological and Engeström’s (1999) organizational views on the driving forces of human development supply a formidable unifying example. The *form* of activity is for Leontev individual and collective but for Engeström collective. The *object owners* are for Leontev the individual but for Engeström they are communities of practice. *Salient related phenomena* are for Leontev motivation and need. For Engeström they are material production and transforming routines.

From a US perspective on activity theory Wertsch's (1998) offers a synthesis to the implied 'dispute' between Leontev's and Engeström's approaches. He does so by deploying the concept "mediated action". When an agent acts with culturally developed tools like ICT hard- and software, creative dynamics is set in motion. Wertsch's (ibid.) model inspires the researcher to go beyond superficial (social) analysis, i.e. comparing, abstracting and generalizing the individual agent. Provided the researcher has got an intention to develop theory in mind, he can understand the forces that shape human action. For this author the object of activity is to compose textual contents that enhance the analytic potential of activity theory.

4. Interacting with technology

The traditional power structure in a teaching and learning environment is a hierarchical structure with the teacher residing on top. By acting accordingly, teachers enable for new patterns of interactions, communications and relations to appear. Contemporary discursive practices supported by technology are democratic means and medium at the same time. So, ICT practices complement the teacher's job by facilitating for experiences, relations and interaction. The technology also imposes restrictions on construction of meaning, relation building and decision making in "social spaces". Hirst and Vadeboncoeur (2006, p. 206) say such social spaces are "most easily defined by conversation, speech and intention." As long as the discoursed spaces cover a participatory and collective approach to schooling, any ICT arrangement offers transformation of the students' objectives, relations and identities. But equally important is that organized social spaces form a short-lived situated practice, a one-off opportunity, i.e. time and place are here and now but only momentarily present. Gieryn (2000, p. 471) suggests that a conservative hierarchical classroom context "stabilizes and gives durability to social structural categories, differences and hierarchies; arranges patterns of face-to-face interaction that constitute network formation and collective action; ["Place"] embodies and secures otherwise intangible cultural norms, identities, memories." Of course there are other kinds of virtual and real life meeting spaces situated in time and place, still materializing as one-off events.

For any social space Nardi (1996, p. 70) asks "How can we confront the blooming, buzzing confusion that is 'context' and still produce generalizable results?" She (ibid, p. 70) eventually justifies her question, saying "It is especially difficult to isolate and emphasize critical properties of artifacts (software) and situations (groups) in studies that consider a full context." Here focus is on the use of ICT in situated group interaction, specifically on an emerging activity which either inspires or alternatively puts off teachers from committing themselves to a shared object, a learning object, an objective or an "objectified motive" (Christiansen, 1996). Even though activities may overlap and objects be contradictory, Rueda, Gallegos and Moll (2000, p. 71) notes that by deploying a boundary crossing object (Rogoff, 2003) like a hard- and software supported oral session characterized as medium plus activity, analysis of mediation between the participants is an opportunity, because "The sociocultural perspective focuses on features of the basic social organization and the underlying assumptions of a given social context, and considers the effects these might have on students' *participation and competence* as well as how the individual transforms the context." Tuomi-Gröhn, Engeström and Young (2003), plus Walker and Nocon (2007, p. 180) argue that ICT designed material and psychological transformation makes it necessary to

define an ability in the teacher to elicit higher mental functions by “boundary-crossing” objects between people and media.

[They] understand and negotiate the meanings, through the use of material and symbolic artifacts and understand and negotiate the meanings, through engagement with others, of the practices of a group and of the roles of individuals therein. (p. 180)

In outlining co-configuration of work and contextual learning processes for boundary crossing objects related to ICT, Engeström (2007, p. 33) refers to Keller and Keller (1996, p. 103) who say “tools may well be used in multiple ways even within a given constellation.” However, there is little variability or flexibility in ICT applications, online games excluded (Hansson, 2008). Contexts accompanying the software may vary considerably, depending on the participants’ motivation, skills, group dynamics or other. So the actual configuration of ICT artifacts is a unique context in and by itself. This fact enables for several ways of mediating between objects, processes, texts and people. The limited (resisting rather than constraining) design in many ICT interfaces safeguards *multi-mediation*, a term Bødker and Andersen (2005) introduced (compare *double stimulation* in Portes et al. 1997). However, the major contribution in Engeström (2007, p. 34) and Bødker and Andersen (2005) lies in the way they supply a framework for identifying mediating processes for collaborative co-construction of meaning. The journey goes from technological tool usage to producing pre-empted results and ultimately for purposes of teaching and learning by co-construction of a shared learning object. For any ICT context, flexibility with the specifics of the context is a prerequisite.

If we take “transformative learning” (Engeström, 2007, p. 36) to encompass a struggle between a discourse related to co-configuration work for protecting self consciousness/self-management (SC/SM) and another discourse also related to co-configuration work but for safeguarding professional thinking (PT), there is unity between available texts, applications and procedures. The given concepts, models or procedures suffice because there is a group process of co-configuration (of a learning object) going on during successful verbal sessions. The teachers’ need/motive pushes for transformations between the students’ varying levels of abstract thinking. Also, and contrary to Engeström’s (ibid, p. 36) suggestion, the teachers find a dialectic relation of resistance rather than constraints between design and implementation. Finally, Engeström’s (ibid.) argument that the individual and the collective accompanied by the present and the future “seemed to merge” (ibid, p.36) does not apply the reason being that pre-designed software solutions operate from different ways of thinking, suggesting saying and writing combines with spontaneous/reflected and self-conscious/professional transformative thinking. On the other hand, Engeström’s (2007, p. 38) account of transformative learning by co-construction does apply because (a) transformative thinking radically broadens the use of the shared objects. Learning by experiencing (b) puts the participants into imagined, simulated or real situations that require commitment in actions with material objects and artifacts that follow the logic of an anticipated or designed future model of the activity. Finally, (c) horizontal and dialogical learning creates knowledge and transforms the quality of an activity by crossing psychological boundaries between activity systems. Statement (c) is true for reasons of group dynamics between peers. Statement (d) is adequate because teachers foresee classroom applications in a new role as facilitators. Statement (e) is appropriate because

teachers bring their experience to similar computer room situations. However, further specification of the object of work – in this case learning – is necessary.

In designing and operating ICT user interfaces Beaudouin-Lafon (2000) separate between domain objects materializing during object construction and interaction facilitated by object instantiation. The domain object is an overall objective which turns a variety of behaviors into an interesting and rewarding exchange of ideas, decision-making and learning. The instrumentality of the interaction is the actual components which transform the teachers' actions into subtle commands for modifying the domain object. Bødker (1991) suggests a comprehensive approach to understanding how user-technology interfaces should be designed and enacted. One aspect relates to how (i) the user operates the keyboards. Another aspect relates to (ii) the logical structure of interaction with the interface. The third aspect relates to (iii) how verbal objects "inside the computer" correlates with oral objects in the open. Any way we choose, there is a need for the technology to be transparent for the user. Bødker (ibid) refers to interactions where the user focuses on the contents of his work while the 'invisible' mediating artifact looms in the background.

In line with research on human computer interaction (HCI) on computer-mediated affordances, Torenvliet (2003) adds to the transparency of the concept by suggesting that a good design should provide visual, oral and tacit clues, powerful enough to guide the user on how to execute operations. Several ICT solutions offer a pre-packaged "interaction design" defined by Winograd (1996) as a space for human communication and action. For educational purposes ICT supposedly transform the users way of thinking, reflecting and learning – if a competent 'cultural broker' (Van Oers, 1998) support activities – turning the users into technologically empowered and socially contextualized agents. The facilitator's leadership, communication and social skills decide the efficiency of the technology. Roth (2004, p. 2) argues that activity theory is becoming increasingly effective in studies of interaction, communication and education, particularly regarding "the dialectical nature of production and the inner conflicts of human activity." It is however, hard to model, observe and analyze such dynamic contradictions other than by referring to the intricate relationships between subject/object plus theory/practice Kurt Lewin allegedly said there is nothing as useful for practice as a good theory and also productive practices prove to be theoretically rewarding.

5. Implications of applications

There are methodologically relevant implications of an activity theoretical approach to understanding human computer interaction as a means for inventing designs for teaching and learning. For one kind of focus Nardi (1996, p. 95) suggests research should analyze what people consider as their main objective during man-machine-interaction. For example, is it a realistic objective for research to focus on broad patterns of activity rather than collectively shared tasks and/or fragmented episodes? Some argue it is necessary to understand interactive processes from the individual users' point of view. But any methodology for exploring how people interact and make sense out of computer-mediated sessions needs specifying. Research must establish a point in time in the development of a digital medium when a first instantiation of the phenomenon under study, i.e. community feeling or curricular achievement, acquires its characteristics. Research must identify the main contradictions during each phase of development. Finally, research must trace the

development of an emerging social system – the necessary and optimal result of the participants ability to solve naturally appearing contradictions.

Young people on social media are aware of the rules of conduct for having meaningful exchanges by means of contact-making, turn-taking, sequencing, time management, systems maintenance, pausing and so forth. Digital inhabitants also know how to navigate and operate in multiple digital contexts because they learn about web-based speech acts, irony, banter and other forms of communication. It is a valid objective for research to uncover if the actual contents of an individual I-argument, the genius, uniqueness or creativity of an entry or functional we-relations, perceptions and expectations trigger productive responses and enables communities to develop in an environment of shared co-construction of a learning object. Furthermore, it matters if we attach social qualities to an individual agent by reputation, strategy, previous contact, familiarity, antagonism or persistence. Researchers need to inspire colleagues to produce cognitive, psychological or material results. However, it could well be that the challenge of decoding individual behavior by input-process-outcome-feedback merely enables for analysis of the social system. In-depth analysis of elusive learning objects requires a different set of concepts, new models, and complementary theory.

The practical implications of running an Internet project on teaching and learning imply, in the very least, a typology of primary, secondary and tertiary artifacts. Wartofsky's (1979) typology may be used for demonstrating ICT applications as a means for creating cognitions related to basic curricula and syllabi and to fostering ethical behavior related to dialogue, empathy and therapy (Hansson et al. 2010). Primary artifacts are the equipment. Secondary artifacts are the functioning of the equipment (plus working routines surrounding it). They are deployed for transmitting the skills that people demonstrate in sharing information. Tertiary artifacts transcend the practical processes and realities of a studied phenomenon. The described design creates possibilities for analysis of future-oriented activities. With little discrimination, however, Bødker (1991) and Wartofsky (1979) take onboard a similar perspective on mediating artifacts, covering transparency, affordance and creativity plus – interestingly enough – agency (Kaptelinin & Nardi, 2006). Due to such references, we may narrow down the objective of research on I-agency vs. we-systems thinking. More specifically, we can differentiate between mediation, usage, agency and mental processes. In studying transparence in objects, affordance by objects and creativity in people, we can concentrate on analyses of usage avoiding agency-focused HCI interactions or systemic focused ANT extremes. Such a solution needs further specification and Engeström's (1987) tripartite trajectory for exploring dialogical relations between participants engaged in (i) co-construction, (ii) object construction and (iii) expansive learning offers a valid alternative.

5.1 Context of investigation

Due to the fact that mediated and mediating interactions cover the interlocutors' goals they are hard to define from the inside regarding the subjects' motivation as well as from outside organizational routines. During *construction of a learning object*, the subjects pay attention to the task at hand in a self-conscious/self-managing (SC/SM) way. During *instantiation of a learning object* the subjects devote their attention to organization of arguments, statements and questions. Eventually they apply higher order professional thinking (PT) about

prospects, applications or audiences. It seems equally reasonable to assume that during instantiation of a learning object the subjects apply “discursive mediation” as a verbal process helping them share and improve their beliefs, values and intentions. For certain, this process is closed for direct observation. On the other hand, the researcher may interpret instantiation of a learning object during the ongoing and expanding discourse. Finally, discoursing between the subjects is the mediating means for weak SC/SM- and strong PT-interlocutors. Several influences, foci and cognitions influence the interlocutors’ discourse by means of I-individual and we-collective object internalization and externalization directed towards learning about a specific theme, constructing a learning object by sticking to the theme and instantiating it by creative *and* structured expansion.

The first The first step of such work of such a process is an intuitive and ritual-like process mediated by tradition and culture; the second step is a self-conscious (SC/SM) process relating to group dynamics and social relations; the third step covers need and motive in the individual interlocutor emerging as professional thinking (PT). If ICT mediated learning were supported by “individual agency” alone the outcome would remain at a self-conscious (SC/SM) level. But if learning were supported by a functional “social system” the outcome would be professional thinking (PT).

Implications of Vygotsky’s (1998) most renowned quotation are rarely acknowledged regarding agency on material and people versus social construction of meaning. The quote demonstrates an expansive context for providing a general law on human functioning, thinking, learning and knowledge.

Every function in the cultural development of the child appears on the stage twice, in two forms – at first as social, then as psychological; at first as a form of cooperation between people, as a group, an *intermental* category, then as a means of individual behavior, as an *intramental* category. (p. 169)

When Vygotsky (1997, p. 106) framed the “general genetic law of cultural development” he defined discernible stages of human becoming. Vygotsky’s (ibid., p. 165) categorization builds on historical aspects of developmental psychology like time, context and history. Basic levels are (i) unconscious reflexes and (ii) consciousness of objects. Relevant levels of analysis in adult behavior cover (iii) self-consciousness and self-mastery (SC/SM) versus (iv) scientific/professional thinking (PT). Items (iii) and (iv) form the key principles for analyzing social activities (Pedler, Burgoyne & Brook, 2005, p. 10). For a low level of (iii) self-consciousness (SC/SM) applies that action is a basis for learning; personal development is the result of reflection on action; discourses are directed towards problems without any right answers rather than towards puzzles which require expert knowledge. For a high level (iv) of professional teacher thinking (PT) there is a need for shared work between peers who challenge each other by posing questions that entails anything but a “correct” answer.

5.2 Context of justification

In order to clarify the operational difference, i.e. the effect on individuals in a community of practice between agency defined by individual input during shared sessions and systems thinking defined by how individuals react to peer input, there is a need to draw on a theoretical frame. Main concepts cover *history, context, experience of time and activity*. Data must cover different points of time in a trajectory going from spontaneous socializing (SM/SC) to professional thinking (PT).

Any form of verbal activity - as opposed to insulated singular tool mediated activity - operates as a means for achieving the objective of a particular activity. However in the lucky here-and-now cases, i.e. when individual participants rather than anonymous "social systems" interact, ambitions and fulfillment go beyond the original goal of the interaction. In the unfortunate cases, the actors fail to reach their goals. One explanation would be the subjects' inability to express and take on challenging intentions.

Another contention is that mediation by means of a shared discourse differs from tool mediation, which so far has been the most frequently studied context in general activity theory. First of all, this fact has had negative consequences for how we conceive of a trajectory of object construction, object instantiation (= co-construction) and object transformation (= discoursing). Second, very few researchers have focused on contextualized, verbal activities from a perspective of how the learning object and/or the agents develop. Third, is the question whether we should understand discoursing as a decisive context or as a means for defining/obtaining an emerging objective. A tentative answer would be that interaction between participants defines transactions between the subjects rather than operations aiming at transformation of material substances, commodities or other. For most cases, the subject's behavior, language and rhetoric are automatic rather than deliberately planned manifestations. Rather than relying on an expected structure of interlocutor input, process and feedback the subjects interpret the mediating situation as well as their verbal utterances. They realize that individual and shared behavior influence the characteristics of an evolving learning object of an evolving learning object. This outcome is contrary to an archetypical understanding of linear teaching and learning or curricular achievement.

In malfunctioning groups of interlocutors the discourse comes true as a linguistic activity, for construing intelligible utterances, but without signaling expansive intention, meaning or other. In the failing cases, the compositional structure of interlocutor input is more important than the participating subjects' need, motive or objective to expand an emerging learning object.

6. Concluding remarks

In contemplating the options on how to decide on collective versus individual rationality for explaining human behavior, it is a wise choice to act from a perspective of systems thinking. Neither an individual subject nor a collective of subjects alone influence the potential for learning from interactions aiming at co-construction of a shared learning object. It is rather the singular individual within the group who controls collective development of higher mental functions for the members of the group.

It is easy to see why a certain behavior is rational for the I-individual, e.g. to voluntarily supply verbal input during we-group sessions. One kind of input comes naturally as self-enhancement and another kind is more difficult to perform as professional thinking about education, curricula, information, design etc. Many contexts merely inspire provision and exchange of data. However, should the participating members of a medium stop at providing data, little dynamics, motivation or creativity would see the light of day. So why do some individuals find it rational take on the extra "burden" of supplying personal input when all they need to do is retell distancing pieces of information. It remains a mystery by what inter- or intrapersonal means some subjects manage to "balance" their verbal input so that co-construction of a shared learning object becomes rational for a collective of peers. Successful

participants find it collectively rational to listen, moderate and adapt to individual input on a given theme. Less successful participants post their verbal input at a level which is rational from an individual perspective alone, i.e. they repeat distancing data by referring to anonymous Self rather than to their inherent desire to develop professional thinking by social construction, social competence or empathy social construction, competence and empathy.

7. Summary

One inspiration for this study of relevant influences on general activity theory emerges from Kaptelinin and Nardi's (2006, p. 235) closure that research should "theorize transformations between individual and collective levels." For activity theory, the individual agent engages in object-oriented activity, striving to fulfill his needs, motives and objectives. For analyses by systems thinking, on the other hand, the individual supplies sterile data and applies simple rules according to a pre-set blueprint. Thus far everything is clear. Outlining the mechanisms for how SC/SM input transforms the individual's inter-mental world and how the PT entries influence peers' intra-mental world remains a mystery.

I have explained differences between individual and collective input to human activity systems. People intuitively construct transform and instantiate learning objects, regardless if they were instructed to do so or merely supply answers to simple questions. A tripartite division of relevant units of analysis consists of individual, collective and individual in group.

My original objective was to separate between individual and collective influences on human behavior. In researching collectively co-constructed and shared "togetherness" it is foolish to refer to an individual actor's behavior. It is equally foolish to refer to a collective subject involved in an activity. But it is wise to refer to pro-active individuals in responsive groups of peers. Also, mediating ICT tools seem to have a crucial impact on the collective(s) of subjects. Hence, future research needs to study the effect of mediating software for promoting professional thinking in a collective of users.

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An Anthropology of *Singularity*? Pastoral Perspectives for an Embodied Spirituality in the *Annus virtualis* and Beyond¹

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1. Introduction

In the award-winning film, “The social network” (2010), the origin, development and far-reaching significance of Mark Zuckerberg’s *Facebook* are highlighted. In the film, one of the characters, Sean Parker, refers to the Facebook phenomenon as “[t]he true digitalization of real life” (nilesfilmfiles.blogspot.com. 2011:02).

Taking into account that film has developed into an important technological and visual expression of meaning (Graham, 2002; Louw, 2008), it seemed necessary to take note of how the advancement of technology is portrayed. With the accent on possible future developments in “performing the faith” (Swinton & Mowat, 2006, p. 4), as well as on giving expression to the dynamics of life – since life “is about change” (Astley, 2002, p. 21) – the aim of the research was to trace the contours of the “true digitalization of real life” and the pastoral perspectives for an embodied spirituality.

Since we are living in a world where “the spirit of technology pervades the whole of culture” (Schoorman, 2003, p. 13), the challenge of addressing this quest is further demarcated through the acknowledgement of the fact that we currently find ourselves in a world characterised by “the new social structure of the Information Age”, which constructs “a culture of virtuality in the global flows that transcend time and space” (Castells, 2006, p. 381). The demands that are made upon our time as a result of this culture of virtuality challenge us to examine “the impact of twenty-first-century technologies – digital, cybernetic and biomedical – upon our very understanding of what it means to be human” (Graham, 2002, p. 1). The contours of this contribution are however not only to be found within the meaning of the present age of virtuality, but also wants to map the considerable scholarly discussion regarding the movement toward a state of posthumanism (Lunceford, 2009). When the term ‘posthuman’ is used, the condition referred to by writers and intellectuals, “who envision a day when humans will virtually merge with their technology, thereby creating a new and superior posthuman species” (Waters, 2006, p. x), is brought to

¹ This is an extensively reworked, updated and edited version of my earlier published article *An embodied spirituality: Perspectives for a bodily pastoral anthropology*, which was published in 2008 in *Acta Theologica*. 28(2):118-132.

mind. Within this broad domain of interest, questions relating to forms of embodiment therefore play an important role in the quest for relevance, especially taking into account that “[t]o enter virtual reality is to cross a threshold where physical and temporal limits are suspended” (Waters, 2006, p. 52).

In the evolving understanding of our age as the *annus virtualis* (Joubert, 2010, p. 48) – and in thinking ahead into the future – the traditional lines of demarcation are being eliminated (Barna, 2011, Kindle edition). A futuristic possibility exists of “scanning our consciousness into computers”, enabling us to “enter a virtual existence or swap our bodies for immortal robots and light out for the edges of space as intergalactic godlings” (Time, 2011, p. 27). This links up with Graham’s (2003, p. 32) observation that “technological advance is reshaping what it means to be human”.

Taking this evolving understanding as a point of departure for a critical reflection on the scientific fields of practical theology and, in particular, pastoral care – as well as futures studies, *inter alia* – the domain of interest is not only reflected upon, but recent and future developments are also taken into account, paving the way for the motivation of an interdisciplinary discourse. The research on which this contribution is based is characterised by a philosophical analysis of relevant concepts leading to theory building. In coherence with the theme of the contribution, the documentation of research is delineated by making use of the metaphor of internet connectivity and associative networks of meaning (Müller & Maritz, 1998) as a possible expression of the “technologization of nature” (Graham, 2002, p. 2). Connecting to the internet evokes the expectation of encountering landscapes of meaning – some in the form of old, familiar territories, while others comprise uncharted virtual horizons that await the exploring visitor.

2. Loading

The term ‘loading’ evokes the experience of a webpage being downloaded and loading onto the computer screen. A virtual experience is commonly facilitated by connecting to the internet, thereby creating ‘cyberspace’, which refers in this context to the “symbolic, imagined space between nodes on the network that allows new selves and new worlds to be created” (Garner, 2004, p. 16). In using the metaphor of the internet, I do not wish to imply that this is the only expression of technological advancement. Rather, it is an expression of the current “medium-is-the-message” world (Carr, 2010, p. 1). Graham (2002, p. 4) explains the world of shifting realities:

Just as the boundaries between humans, animals and machines are eroded, so too are distinctions between the virtual and the real. New digital technologies have reconfigured taken-for-granted patterns of physical space, communication and intimacy.

My particular approach to the theme of the article is reflected in the understanding that “anthropology is essentially a hermeneutical problem” (Louw, 1999, p. 157). In this approach the emphasis falls on hermeneutical methodology, in which spirituality as a universal human concern in the quest for transcendence and meaning is investigated in terms of a variety of religious traditions and scholarly disciplines (Schneiders, 2005). It is from this point of view that an investigation of the meaning and implications of the futuristic concept of ‘singularity’ is conducted, in terms of the following definition:

The ultimate goal for transhumanism is to attain what is called the 'singularity': a point in the (not too distant) future at which the rising curve of technological progress reaches its peak. According to transhumanists, the singularity will signal a radical qualitative change in the nature of human/machine intelligence – a transition into super intelligence and omnipotence (Graham, 2003, p. 38).

The foregoing perspectives could possibly be evaluated by making use of perspectives from a dogmatologically informed anthropology (Staley, 2011). However, in contrast to a dogmatological anthropology, a pastoral anthropology focuses on understanding human beings in their recovery (therapy), as well as on accompanying them in their search for meaning in life (Louw, 1999). In a previous research contribution (Van den Berg, 2008), it has already been indicated and confirmed that when perspectives on an “embodied soul” are negotiated for the purposes of pastoral care, these perspectives serve to emphasise, *inter alia*, that identity can be understood in terms of a so-called “bodily identity” (Murphy, 2006, p. 141), thereby accentuating a positive perception and experience of the body (Ganzevoort & Veerman, 2000). The implication of this in a possible description of a pastoral anthropology is thus that corporeality “confronts us with the realities of vulnerability and affliction”, and that this very vulnerability “is deeply embedded in our bodily existence” (Van Huyssteen, 2006, p. 320). The implications of these accents will then need to be re-evaluated and re-articulated within the developing understanding of singularity, and as part of the world of the *annus virtualis* and beyond, where the possibility of a “transition from *Homo sapiens* to postbiological *Homo cyberneticus*” (Graham, 2002, p. 9) is envisaged.

As the cyberspace visitor would know, it is always possible to re-visit previous domains by using the backspace option. Re-visiting previous domains will hopefully contribute not only towards the evaluation and re-articulation of the possible further development of the current debate, but also towards the opening up of additional space for evolving vistas of meaning.

3. Backspace

I remember a time when, in the process of rethinking the meaning of anthropology for pastoral care, I reflected on the work of a German anatomist, Gunther von Hagens. During the late 1970s, he developed the so-called plastination technique, revealing inner anatomical structures (Van den Berg, 2008). One of the images portrayed a praying man holding his heart between his hands. To my mind, this image not only depicts the intimate relationship between body and soul, but also metaphorically points to an embodied understanding of spirituality in pastoral care. This insight occurred a few years ago, and at the time I thought that this comprised a new understanding of a bodily spirituality. These days, I find myself in front of the computer, thinking about embodiment in virtuality, where “much human interaction” currently “occurs in a bodiless world” (Herzfeld, 2010, p. 125). As if this were not enough, it is further anticipated that singularity, merging the human being with the machine, will allow “human beings to transcend some of their perceived limitations” (Garner, 2004, p. 16). Understandably, this possible scenario challenges the expectation as to how spirituality will be embodied in an era of singularity. In this regard Dean-Drummond (2005, p. 365) has already pointed out the importance of “[q]uestions about human identity – such as, who am I? Where do I come from? What does the future hold?”

Travelling in the space created by a post-foundational practical theology (Müller, 2005) – with longitudes and latitudes of modernity and post-modernity – where various perspectives from science (Deane-Drummond, 2005) are entertained, cognisance is taken of the post-modern ‘anthropological approach’ to spirituality, as explained by Schneiders (2005, p. 26):

This approach is rooted in the recognition that spirituality is an anthropological constant, a constitutive dimension of the humanum. Human beings are characterized by a capacity for self-transcendence toward ultimate value, whether or not they nurture this capacity or do so in religious or non-religious ways ...

If, in terms of the above, spirituality is regarded as an “anthropological constant”, it becomes an even more challenging quest to reconsider how this “constitutive dimension of the humanum” is to be embodied in an era of singularity. In order to investigate this phenomenon, the overlapping domains of practical theology as a housing discipline for pastoral care, and futures studies as a housing strategy, with a view to sustainability, will be further explored.

4. Domain

It is of the utmost importance to check the domain of the website associated with the specific visit of the internet user in order to ensure the validity of the content that is being downloaded. In this regard, it is also important to cognitively outline the coordinates of the visit associated with this research. In order to navigate through the research territory, I make use of evolving perspectives articulated from the interdisciplinary discussion between practical theology and futures studies.

4.1 Practical theology

I have purposefully opted for a type of practical or public theology, emphasising the role of religion (and spirituality) in life and in all her manifestations, in order to gain a better understanding of society (Ganzevoort 2006:151). In the further development hereof, a specific “theology of the praxis” is presupposed, in which “practical theology takes the praxis as its source and starting point” (Ganzevoort, 2008, p. 10).

Research indicates that many new developments have taken place in recent decades within the field of practical theology (Dreyer, 1998) and in the formulation of pastoral theory (Ganzevoort, 2001; Louw, 1999; Louw, 2003), with particular emphasis on pastoral therapy (Immink, 2003; Scholtz, 2005; Stone, 2001). During the twentieth century, pastoral care began to undergo particular evolutionary developments. A kerygmatic, therapeutic and – since the seventies – new, hermeneutic phase, can be distinguished, in which theology and therapy occur in a bipolar relationship (Foskett & Lyall, 1988; Scholtz, 2005). In the development of pastoral theory, different paradigmatic movements can be identified (Ganzevoort, 2001; Louw, 1999; Louw, 2005). Firstly, there is a movement away from a one-sided preaching model to a participatory pastorate, in which the pastor is instrumental in guiding people to the discovery of God’s involvement in their lives. The fact that the context is being taken into account is important in this movement. Also important is the shift away from the one-sided professional approach, and the replacement thereof with mutual caring on the part of

believers. There is also another movement away from a therapeutic pastoral model to a hermeneutically oriented pastorate, in which emphasis is placed on

... the endeavour to read, understand and interpret texts within contexts. Hermeneutics underlined anew the importance of our human quest for meaning [... and] the importance of compassion: the dimension of pathos in theology (Louw, 2003, p. 54).

In this regard, the discipline of futures studies not only enables us to be cognisant of our current world; it also develops the ability to read the possible contours of a coming time and world.

4.2 Futures studies

The recognition of the general human capacity to approach the future – which includes specific alternatives and choices and which is formed, *inter alia*, by structures, perceptions and forces – in a strategic and purposeful manner, falls within the domain of research and study (Lombardo, 2008; Slaughter, 2001). In terms of this view, “the idea that changes are real and that humanity is in charge of its own fate” (Time, 2011, p. 27), as expressed by the singularity movement, is not only emphasised, but also resonates with futures studies.

The objective of this approach – and also of the broader field of futures studies – would thus naturally be “to contribute toward making the world a better place in which to live, benefiting people as well as plants, animals, and the life-sustaining capacities of the Earth” (Bell, 1997, p. 3). In my opinion, it is important to take cognisance of these challenges, and to address them, since they determine accents of relevance, sustainability and strategy. The focus in futures studies thus falls on “increasingly find[ing] ways to integrate futures literacy with futures strategy” (Slaughter, 2001, p. 415).

Falling within the focus field of the domain of futures studies is the movement of transhumanism, in which advanced technologies are portrayed in the pursuit of human perfection: the construction of artificial intelligence to augment intellectual functions, as well as the use of biomedical transplants, prostheses, genetic modification and cryonic preservation to stave off the effects of disease and ageing.

Entering the uncharted terrain of “extremely rapid developments in both science and technology” leads to an awareness of “possibilities for radical revision of concepts of humanness in the future” (Murphy, 2010, p. 21-22). In this regard, even the theologian would do well to take the words of Korowai to heart, namely that inventing “is a lot like surfing: you have to anticipate and catch the wave at just the right moment” (Kurzweil, 2010, Kindle edition). By way of analogy, it is therefore understandable that – in terms of the central metaphor in the documentation of the research – I will need to make use of the Forward button in the search for new markers for an embodied spirituality in this uncharted and ever-unfolding terrain of virtuality and beyond.

5. Forward

As pointed out earlier on, the general human capacity to approach the future in a strategic and purposeful manner is one of the focus areas in the domain of research and study (Lombardo, 2008; Slaughter, 2001). It also resonates well with the central metaphor of virtual connectivity associated with the delineation of the research.

The addressing of the challenges outlined above will entail, *inter alia*, the application of futures strategy in a manner that is relevant and sustainable. With this aim in view, the following observation by Graham (2011, p. 30) is worth noting:

We are therefore presented with two contrasting representations of the effects of genetic, digital and cybernetic technologies on the way we live, work, communicate and even reproduce. The coexistence of fear and fascination may be an indication of our uncertainty as to the future trajectory of human engagement with technologies: as promise, or endangerment; as mastery, or extinction. It brings forth the question of whether 'technology' represents a diminishment of human uniqueness, an attenuation of healthy political and civic associations, a narrowing of cognitive horizons, even the obsolescence of Homo sapiens itself, or whether the digital and biotechnological age will propel humanity towards greater knowledge and prosperity – from Homo sapiens to Homo cyberneticus.

A closer consideration of the possible meaning of the contours of a *homo cyberneticus* for an embodied pastoral anthropology in the *annus virtualis* and beyond is part of the exploration that comprises the focus of the next section.

6. Refreshing

Taking the digital embodiment of real life as a metaphor for the current state of affairs, and thinking ahead into the future, I focus in this chapter on the possible meaning and mapping out of an embodied spirituality.

In this regard, I will use the concept of singularity as a guiding metaphor for the last part of this contribution, mapping out the space in which thoughts and perspectives on a future dispensation and the meaning thereof for a pastoral anthropology can be articulated. Raymond Kurzweil, the father of the Singularity movement, comments as follows:

Understanding the Singularity will alter our perspective on the significance of our past and the ramifications of our future. To truly understand it inherently changes one's view of life in general and one's own particular life. I regard someone who understands the Singularity and who has reflected on its implications for his or her own life as 'singularitarian' (Kurzweil, 2010, Kindle edition).

Taking these perspectives into account, I wish to accentuate the importance of construing a more bodily-oriented theological anthropology and spirituality for pastoral care, embodying a new understanding of engagement with different scientific domains. As a background to this thesis, it is important to understand that “[o]ur bodies determine much of the nature of our interaction with the world around us. We experience the world through our senses, act within the world through our voices and movements. Our perception is limited by our physical abilities” (Herzfeld, 2010, p. 119-120).

With reference to the *annus virtualis* and beyond, it has been pointed out that it seems unfortunate that “very few works in pastoral theology pay special attention to anthropology. A specific anthropology is often implied, but without giving an explicit description or an exposition on how this anthropology influences counselling and therapy” (Louw, 1999, p. 17). The Cartesian dualistic reading, implying a distinct division between body and soul, and which was regarded for a long time as the only standard (Ganzevoort & Veerman, 2000; Lakoff & Johnson, 1999), was even further expanded by others who

proposed a trichotomy between body, soul and spirit – while there were also those who postulated that only the spiritual exists (Murphy, 2006). Clearly, if the initial reading of the traditional dichotomy between body and soul is endorsed, the implication is that “we are essentially disembodied Souls not of this world [...] focused on transcending all the things of the world” (Lakoff & Johnson, 1999, p. 564). In the context of the modern world, this reading has become even more outdated. It seems appropriate – and imperative – that an informed pastoral anthropology should be developed and explicitly described as part of an orientation towards the *annus virtualis* and beyond.

Russel (2005, pp. 338-339) indicates that, in the light of the foregoing, questions such as the following become relevant and important:

What do advances in artificial intelligence have to tell us about human nature? One way to respond is by asking whether embodiment makes the difference between human intelligence and computers ... And what do computers tell us about our capacity for spirituality?

In answering these uncharted questions, broader perspectives of connectivity with the theme under investigation might open up new vistas and domains of meaning.

7. New domains and connectivity

Finding ourselves in the *annus virtualis* – and in an era beyond – the discovery is made, in the well-known words of Marshall McLuhan (Kurzweil, 2010, Kindle edition), that although we have built the tools, we are now being built by them. Regarding this observation, Kurzweil (2010, Kindle edition) points out that “[t]his is not because humans will have become what we think of as machines today, but rather machines will have progressed to be like humans and beyond. Technology will be the metaphorical opposable thumb that enables our next step in evolution.”

Considering the meaning of the above for the articulation of a spiritually embodied anthropology in the *annus virtualis* and beyond, two introductory perspectives on identity and community are discussed below.

7.1 An “embodied soul” anthropology/spirituality requires a particular view of God informing a new identity

Elaine Graham (1999, p. 419) sketched the new horizons of posthumanism:

New, digital and biogenetic technologies – in the shape of media such as virtual reality, artificial intelligence, genetic modification and technological prosthetics – signal a ‘posthuman’ future in which the boundaries between humanity, technology and nature have become even more malleable.

With this new vista in view, it is understandable that in the development of science, a reciprocal influence between the description of God concepts and an anthropological description (Webster, 2003) must be accounted for (Soskice, 2001). Regarding the reciprocal relationship in the formulation of possible alternatives, Du Toit (2006, p. 1259) says the following:

God concepts change as the notion of humans as images of God changes [...] God’s image as described in divine revelation is expounded by science in the terminology of genetic mapping, cognitive science and socio-biology.

If one takes the perspectives that have already been offered in the research seriously, “an abstract *imago Dei*” (Stone, 2006, p. 1147) is avoided, and one discovers that

... the image of God is not found in some intellectual or spiritual capacity, but in the whole embodied human being, 'body and soul'. In fact, the image of God is not found in humans, but is the human, and for this reason imago Dei can be read only as imitatio Dei: to be created in God's image means we should act like God, and so attain holiness by caring for others and for the world (Van Huyssteen, 2006, p. 320).

As pointed out earlier, a pastoral anthropology aims to understand and assist the human being in his or her search for meaning in life (Louw, 1999), and to offer support when he or she is confronted with the reality of affliction, and of the vulnerability that is “deeply embedded in our bodily existence” (Van Huyssteen, 2006, p. 320). This entails, *inter alia*, assisting the person in coming to terms with this vulnerability, through a deeper understanding of his or her identity as an “embodied soul” – but also through a positive perception and experience of his or her body as a “bodily identity” (Murphy, 2006, p. 141).

In negotiating and translating the meaning and implication of the above for an era of virtuality and posthumanism the questions are then about “a God that has no physical body that can fill the vast expanse of space yet dwell in one's heart [...] Posthumanism does not remove this paradox; rather, it removes God from the equation and demands that we transcend the flesh without divine aid” (Lunceford, 2009, p. 93). Precisely for this reason, but also – in particular – for the purposes of describing a possible “embodied soul” pastoral anthropology, the accents of the so-called eschatological theologians in pastoral care are important, and will continue to be so (Lester, 1995). For one thing, these accents offer the possibility of reflecting on a theme such as the resurrection and how it could be further imbued with pastoral meaning, not merely as the “re-clothing of a ‘naked’ soul with a (new) body”, but rather as “restoring the whole person to life – a new transformed kind of life” (Murphy, 2006, p. 23). These perspectives need to be further entertained in the debate between a better future existence confirmed by Christ and His resurrection and posthumanists seeking to transcend embodied existence (Staley, 2011, p. 240).

7.2 An “embodied soul” anthropology/spirituality recognises relationship networks

Following the contours of virtuality and a possible era of posthumanism, the challenging trajectory of mediated relationships questions the physical immediacy (Lunceford, 2009). It is agreeable that in a pastoral “embodied soul” anthropology particular emphasis should also be placed on the human being as a relational being, because “our bodies constitute the very possibility of engagement with one another in this world or any other” (Murphy, 2006, p. 140). This is indeed necessary if it is assumed that what is presupposed here is the traditional meaning of “soul”, referring to “the quality of positions and attitudes that people take within the dynamic network of relationships” (Louw, 2005, p. 18).

The practical implication of the embodied spirituality described above would be for example the reconsideration of perspectives on sexuality. Shuman (2005, p. 405) contextualises these perspectives, acknowledging that

[w]e cannot learn properly to value the gift of sexual love and so learn to be good and faithful lovers, until we learn to be good and faithful friends; we cannot be good and faithful friends until

we understand that our friendship with each other is fully established and perfected by our being made friends of God.

To illustrate how this meaning could possibly be further negotiated as part of an “embodied soul” spirituality for an era of virtuality and beyond anthropology, Lunceford (2009, p. 92) claims that “[o]ur views of the body, specifically as it relates to the soul, have implications for how we function sexually”. These accents, among others, would therefore be helpful in the process of reconsidering a comprehensive description of a pastoral anthropology for use in for example pastoral therapy models applicable to an era of virtuality. These travelling coordinates represent markers for ethical reflection on aspects that need to be thought through for the purposes of further research in pastoral care. The following observation by Lakoff and Johnson (1999, p. 566) may serve as a guideline for a possible formulation and articulation of such ethical reflections, and the implications thereof:

An embodied spirituality requires an aesthetic attitude to the world that is central to self-nurturance, to the nurturance of others, and to the nurturance of the world itself [...] It requires pleasure, joy in the bodily connection with earth and air, sea and sky, plants and animals – and the recognition that they are all more than human, more than any human could ever achieve. Embodied spirituality is more than spiritual experience. It is an ethical relationship to the physical world.

8. Conclusion: Disconnecting and re-connecting

Just as one has the option of disconnecting and reconnecting to the internet in establishing connectivity, the aim of the research was to document certain perspectives but also to open up some new possibilities for further research. The connection established through the research indicated that in the era of virtuality and beyond, new pastoral perspectives for a possible anthropology of singularity would be an imperative.

It would seem that the traditional anthropological understanding of what it means to be human needs to be revisited and adjusted in the light of technological advancements at various levels. This challenge is constantly increasing in the light of rapid technological advancement and its implications for the identity of humankind. Indeed, the *annus virtualis* (and beyond) will not only confront us with the question as to what it means to be human (Herzfeld, 2010), but also how to respond regarding a relevant pastoral understanding.

The value and the further development of this research, to my mind, lies in the (re)discovery of “the shared epistemic resources and problem-solving abilities of our various research strategies”, in which researchers – also in pastoral theology – receive the freedom to escape from “being the fideistic prisoners of these research traditions” (Van Huyssteen, 1998, p. 162). Therefore, in the re-evaluation of a possibly more spacious pastoral anthropology and spirituality in the *annus virtualis* and beyond, it seems necessary to enter “a safe kind of epistemological space” in order “to step beyond the limitations and boundaries of our own religious and disciplinary contexts” (Van Huyssteen, 1998, p. vxiii). In these perspectives, the accent falls on incarnating and moulding a particular view of human beings and their social relationships and contexts within a virtual world and beyond, asking questions about the “evolution of the soul” and the “evolution of the capacity for spirituality” (Russel, 2005, p. 337-338).

As stated earlier, in what might be a limitation with regard to formulating possible pastoral perspectives for anthropology of singularity, the possible scope of future technological accents is vast. Future research might indeed further explore specific domains of interest and their meaning for a pastoral anthropology in order to portray real life in true digital format.

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Section 8

Quality Assessment

The Effects of Environment and Family Factors on Pre-Service Science Teachers' Attitudes Towards Educational Technologies (The Case of Muğla University-Turkey)

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1. Introduction

In our world, where information and technology is increasingly developing, it is undeniable fact that technology has great impact on education. The main goal of education is to equip individuals with required knowledge and show them how to use this knowledge. To do so, the traditional methods used seem to be inadequate. In this respect, there is a need to make use of educational technologies (Uzunboylu, 1995; Yenice, 2003).

Every type of tool and equipment helping to reduce the interaction between the student and the subject that needs to be learned to the level where the student can understand it is in the scope of educational technologies. In the classroom wide-range of materials ranging from teacher, chalk and blackboard to educational videos and virtual environment can be used (Akpınar, 2004; Hannafin & Peck, 1988). It is of great importance to make use of more educational tools in the classroom to help students understand better. In today's classrooms, visual and auditory materials come to the fore. For these visual and auditory materials to be effectively used, the specific features of the tools should be known. These features may seem to be very simple sometimes, but they can be very important for the effective use of a tool; hence, for the quality of the lesson (Küçükahmet, 1999). Binbaşıoğlu (1994) reported the good sides of educational materials-based teaching as follows: they help maintain the continuity of teaching and enhance motivation, they help teach correctly, they bring variety, reality and concreteness to teaching and learning environment and they are emotionally enriching. On the other hand, they lessen the use of language, they can be really expensive, they may be time-consuming, teachers may not be qualified enough to use such tools and they may lead to deterioration of thinking skills (Rüzgar, 2005).

Alper and Gülbahar (2009; 124-125) performed a meta-analysis on studies carried out on educational technologies between 2003 and 2007, and they found that most of the studies focus on "the effects of multimedia-enhanced computer" and "integration of technology and internet education". Research looking at the application of various dimensions of education technology in teaching has revealed that educational technology applications have multi-

dimensional positive impacts on student achievement. In this respect, various learning materials (games, analogies, sample events, experiments and models) (Aktamiş et al., 2002), teaching through models (Şahin et al., 2001), computer-assisted materials (Akdeniz and Yiğit, 2001; Kibos, 2002; Yumuşak and Aycan, 2002) have been found to improve students' achievement. Akpınar et al. (2005) investigated the students' opinions about the use of technology in Science Course at elementary level and the teachers' frequency of use of technological tools and equipments in science courses. They found significant differences between private and state schools and depending on the type of the school, they found significant differences among students' opinions and frequency of use.

Can (2010) carried out a study with 184 pre-service teachers from the department of elementary education to determine their attitudes towards the effects of using two teaching materials, over head projector and projector, on learning. At the end of the study, the author found that the pre-service teachers have generally positive attitudes because they think that the use of these materials bring variety and change to teaching environment, eliminates monotony from the class, and provides colorful, lively and smooth learning-teaching. Frantom et al. (2002) carried out a study to investigate the children's attitudes towards technology, and they obtained two-factor scale consisting of interest, ability and alternative characteristics. When the elementary and secondary school students' scores taken from these two sub-dimensions were compared, significant differences were found between them. At the same time, the attitude varies depending on gender. Dalton and Hannafin (1986) evaluated the effects of video, computer-assisted teaching, interactive video applications on learning performance and attitude and they found that the participants think that only computer-assisted teaching is effective and there is no need for interactive videos. On the other hand, when interactive-video teaching was compared to computer-assisted teaching and video, it was found that it could significantly affect the attitudes of students of low ability (Cited in Yavuz & Coşkun, 2008).

Tanguma et al. (2002) investigated technology utilization models within a context of a course. They found that the teachers use package programs in subject area, they carry out impressive applications with tools such as scanner, digital recorder and voice recording machine and they make use of technology and internet in their lessons. Woodrow (1992) reported that there is a correlation between the attitudes towards technology and computer experience. Chou (1997) stated that computer experience affects teachers' attitudes towards computer. According to Ropp (1999), there is a significant relationship between computer access and attitudes towards computer and use of computer for an hour in week.

When education is considered as a unity, it is not possible to achieve its objectives by only focusing on information given at school and excluding students' families and the environment where they have been brought up from the process. The training of an individual is not limited to the places of formal education.

One of the most important two factors determining human behavior, environment (the other is heritage) can be defined as the physical, biological, social, economic and cultural settings where individuals maintain their relationships and carry out their mutual interactions throughout their lives. Environment means everything affecting an individual. The individual himself/herself is an internal part of this environment. A social creature, man is in various interactions within the social environment where he/she lives as a

complementing part of it. The environment covers all the systems either being physical, chemical and biological (Yiğit & Bayrakdar, 2006). Throughout their lives, humans gain information, skills, attitudes and values as a result of their interactions with the environment. The basis of education is made up by these experiences (Ertürk, 1993).

According to Herman (1998), any person is born with genetically inherited characteristics which make up 30% of his/her personality and the remaining 70% of the personality is shaped by environmental conditions such as the things provided by parents, information gained from formal and informal education, things learned from peer circles, and the culture where he/she is brought up. The ecologic environment and family environment where the individual was born and brought up have great impacts on the formation of the characteristics of the individual. Environmental conditions such as place of residence, housing facilities, transportation, education, health, recreational activities, public utilities etc. and the family conditions such as socio-economic structure of the family, its education level, income level, relationships with neighbors, inter-family relations, the family members' success in performing their role functions have the potential to affect an individual's personal characteristics and skills to communicate with the environment (Kut & Koşar 1989: 19; cited in Deniz, 2003). Within the context of the environment where people are brought up, there may be some important variations observed among the people based on whether they are brought up rural or urban area, socio-economic level and the opportunities possessed to make use of educational facilities. Education process starting in the family and continuing at school and by means of various tools of mass media may vary significantly depending on an individual's coming from rural or urban area and education level of the family.

Besides the high number of students who are not able to attend school continuously without any interruption in Turkey, for many students who can attend a formal education institution regularly, developed technological tools are not available in their personal environment. In this respect, it can be argued that schools exhibit heterogenous structure rather than homogenous structure; hence, students may encounter inequalities stemming from the environments they have been brought up. Moreover, students coming from similar types of families concentrate on similar types of schools and this leads to increasing differentiations and inequalities among schools. This is not the problem specific to only the schools in underdeveloped or developing countries, in developed countries inequalities can be observed depending on local, regional, ethnic, racial, linguistics and sexual variables (Berne 1994; Kozol, 1991; Spring, 1998, s.48-49, as cited in Aksoy, 2003). These result in differences in students' chance to encounter educational technologies having an important place in education process.

In rural areas, due to parents' low level of education, the opportunity of drawing on educational facilities and materials is restricted and this may prevent individuals from developing positive attitudes. However, in urban areas where socio-economic level is high, usually the education level of parents is high. Hence, the children of these parents have more opportunities such as the availability of computers, internet, newspapers, magazines, scientific journals, videos, CDs, mobile phones, familiarity with satellite receivers and all the other technological tools and this has positive influence on children's attitudes towards technological tools and their use of frequency of these tools.

In literature, there are various studies looking at the effects of environment where the individual is brought up or those of education level of parents. Akpınar (2003) conducted a study to investigate how teachers graduated from universities located in different regions

use internet resources inside and outside the class and found that there is a significant difference favoring teachers graduating from universities located in a metropolis (Istanbul, Ankara, İzmir, Bursa, Adana, Gaziantep) or in a sea city. It was found that teachers graduating from universities located in East, South East and Central Anatolia make less use of internet. Erol and Gezer (2006) found that parents' education level and the environment where they live do not have any significant influence on classroom pre-service teachers' perceptions of environment and environmental problems. Devocioğlu and Sarıkaya (2006) conducted a descriptive study to determine the profiles of the students of school of sports in light of some socio-economic variables including parents' education status.

Determination of the attitudes of pre-service science teachers who make up the core of education towards educational technologies can make important contributions to the efficiency and quality of education in general. Among the studies dealing with educational technologies, the number of studies looking at the effects of the environment where pre-service teachers were brought up and their parents' educational status is few and this increases the importance of the present study. Moreover, the present study is thought to have important contributions by drawing the attention to family and environment factors which are important dimensions of education process and providing guidance to researchers, educators and practitioners working in the relevant fields. As stated by Thomas Gordon "**The first and most effective teachers of children are their parents**", education starts in the family, hence, it is assumed that the environment where pre-service science teachers have been brought up and their parents' educational status can have influences on their attitudes towards educational technologies.

1.1 Purpose of the study

The present study aims to determine the effects of the environments where pre-service science teachers have been brought up and the educational level of their parents on their attitudes towards educational technologies. For this purpose, answers to the following questions were sought:

- What is the level of pre-service science teachers' attitudes towards educational technologies?
- Do the pre-service science teachers' attitudes towards educational technologies significantly vary depending on the environment where the pre-service teachers were brought up?
- Do the pre-service science teachers' attitudes towards educational technologies significantly vary depending on their parents' educational level?

2. Method

The sampling of the study which employed survey method consists of 101 first-year students attending science teacher education department of the education faculty at Mugla University in 2009-2010 academic year.

2.1 Data collection

As a data collection tool, personal information form developed by the researcher and 43-item Scale of Attitudes towards Educational Technologies developed by Pala (2006) to elicit the

participants' attitudes towards educational technologies were used. The students were given detailed information about attitude scale and then the scale was administered to those who were willing to participate in the study. It was observed that completion of the scale lasted about 15-20 minutes. The data obtained from the scale were entered into computer and appropriate statistical analyses were conducted. The reliability of the scale was tested through SPSS 14 program package with Cronbach Alpha coefficient and found to be 0.78. This value shows that the scale is reliable and it is enough for it to be administered. In order to establish the validity of the scale, experts opinions were sought about whether the items in the scale measure the attitudes intended. The scale includes five options ranging from "Strongly agree", "Agree", "Undecided", "Disagree" and "Strongly disagree". Scoring was performed from 5 to 1 for positive statements and from 1 to 5 for negative statements. The lowest possible score to be obtained from the scale is 43 and the highest score is 215. If the score obtained is in the range 43-77, it means "Strongly disagree", 78-111 "Disagree", 112-145 "Undecided", 146-179 "Agree" and 180-215 "Strongly agree".

2.2 Data analysis

The data obtained through the scale were analyzed through SPSS program package. Independent-samples t-test was used to test whether there is a significant difference among the students' attitudes based on the environment where they were brought up and One-way ANOVA was used to test whether there is a significant difference among the attitudes based on parents' educational level.

3. Findings and discussions

3.1 Findings concerning the first sub-problem

The first sub-problem of the study is "What are the pre-service science teachers' attitudes towards educational technologies?" The findings concerning this sub-problem reveal that the mean score for the pre-service science teachers' attitudes towards educational technologies is 169.66, standard deviation is 14.19; the lowest score taken from the attitude scale is 125 and the highest score is 207. According to these scores, the pre-service science teachers' general attitude is in the category of "Agree". This finding shows that the students in general have positive attitudes towards educational technologies. There are similar findings reported in the literature. Gunter, Gunter & Wiens (1998) found that pre-service teachers have more positive attitudes towards working on computer and learning through computer and technology in general. Yılmaz (2005), in his thesis study, investigated the effects of technology on students' achievement and attitude and found positive impacts on achievement and attitude. In another study, Sevindik (2006) found positive effects of using smart classes in higher education on students' academic achievement and attitudes. Yavuz and Coşkun (2008) found that pre-service elementary school teachers have positive attitudes towards and opinions about the use of technological tools and equipments.

3.2 Findings concerning the second sub-problem

The second sub-problem of the study is "Do the pre-service science teachers' attitudes towards educational technologies vary significantly depending on the environment where they have been brought up?" T-test was conducted to test whether there is a statistically significant

difference among the pre-service science teachers' attitudes towards technology based on the environment they have been brought up and the results are presented in Table 1 and Table 2.

Environment	Frequency	%
Urban area	85	84.2
Rural area	16	15.8
Total	101	100.0

Table 1. Distribution of the pre-service science teachers according to environment where they have been brought up

Of the pre-service science teachers, 15.8% come from rural area and 84.2% from urban area. As the pre-service science teachers coming from urban area probably have had better technological opportunities, they are expected to exhibit more positive attitudes.

Environment	N	\bar{X}	S	df	t	p
Urban area	85	169.80	14.40	99	.22	.82
Rural area	16	168.93	13.44			

Table 2. T-test results for the science pre-service teachers' attitude scale scores in relation to environment where they have been brought up

According to the t-test results presented in Table 2, there is no significant difference among the attitudes based on the environment where they have been brought up [$t_{(99)} = .22, p > .05$]. This finding indicates that there is no significant relationship between the environment where the pre-service science teachers have been brought up and their attitudes towards educational technologies. This finding concurs with the findings of Can (2010); Erol and Gezer (2006).

3.3 Findings concerning the third sub-problem

The third sub-question of the study is "Is there a significant relationship between the pre-service science teachers' attitudes towards educational technologies and their parents' educational status?" The findings concerning this problem are related to the relationship between the pre-service science teachers' attitudes and their parents' educational status. First, the distribution of the pre-service science teachers according to their parents' educational status is given in Table 3 and then the ANOVA test was carried out to determine whether there is a significant correlation between the pre-service science teachers' attitudes and their parents' educational status and then findings are presented in Table 4, Table 5, Table 6 and Table 7.

Educational status	Mother		Father	
	f	%	f	%
Graduate/Undergraduate	7	6.9	22	21.8
High school	25	24.8	29	28.7
Secondary school/Elementary school	64	63.4	50	49.5
Other	5	5.0	-	-
Total	101	100.0	101	100.0

Table 3. Distribution of the pre-service science teachers' parents' educational status

According to Table 3, 63.4% of the pre-service science teachers' mothers are secondary or elementary school graduates, 24.8% are high school graduates and 6.9% are graduates from graduate or undergraduate programs. 5.0% of them have no education or are illiterate. When we look at the educational status of the fathers, we can see that 49.5% are secondary school or elementary school graduates, 28.27% are high school graduates and 21.8% are graduates of undergraduate or graduate programs. There are no fathers not having education or are illiterate.

Educational status	N	\bar{X}	S
Undergraduate/graduate	7	3.86	.25
High school	25	3.91	.32
Secondary school/ elementary school	64	3.96	.34
Others	5	4.03	.29
Total	101	3.95	.33

Table 4. Arithmetic means and standard deviations for the pre-service science teachers' mothers' educational status

In Table 4, it is seen that there are differences among the arithmetic means. ANOVA test was carried out to determine whether these differences are statistically significant and the results of the test are presented in Table 5.

Source of the variance	Sum of squares	df	Mean of squares	F	p
Between-groups	.14	3	.05	.42	.74
Within-groups	10.75	97	.11		
Total	10.89	100			

Table 5. Anova results for the pre-service science teachers' attitude scale scores in relation to their mothers' educational status

The results of Table 5 show that there is no significant difference based on the mothers' educational status among the pre-service science teachers' attitudes towards educational technologies [$F_{(3-97)} = .42, p > .05$]. That is, there is no correlation between the pre-service science teachers' attitudes towards educational technologies and their mothers' educational status. This finding is supported by the findings reported by Erol and Gezer (2006).

Educational status	N	\bar{X}	S
Undergraduate/graduate	22	3.93	.45
High school	29	3.97	.29
Secondary school/ elementary school	50	3.94	.30
Others	-	-	-
Total	101	3.95	.33

Table 6. Arithmetic means and standard deviations concerning the pre-service science teachers' fathers' educational status

Variance analysis was conducted to see whether the differences seen among arithmetic means in Table 6 are significant, and the results are presented in Table 7.

Source of the variance	Sum of squares	df	Mean of squares	F	p
Between-groups	.02	2	.01	.07	.93
Within-groups	10.87	98	.11		
Total	10.89	100			

Table 7. Anova results for the pre-service science teachers' attitude scale scores in relation to their fathers' educational status

Anova results presented in Table 7 show that there is no significant difference based on the fathers' educational status among the pre-service science teachers' attitudes towards educational technologies [$F_{(2,98)} = .07, p > .05$]. That is, there is no correlation between the pre-service science teachers' attitudes towards educational technologies and their fathers' educational status. This finding is in compliance with the findings of Erol and Gezer (2006).

4. Results

In today's world where information and technology are rapidly changing and developing, it is great importance for students to gain information access and problem solving skills. Therefore, integration of educational technologies into the field of education has an important role in enhancing academic achievement.

A conception of education not drawing on technological opportunities cannot meet the needs and expectations of individuals and societies of the today's world. Today, it is a must for each individual to be equipped with skills of having access to information, organizing this information, evaluating and using it and communication (Toprakçı, 2005; cited in Taşçı et al., 2010). As a result of widespread use of technological tools and devices in the field of education, a need to determine students' opinions about and tendencies and attitudes towards these tools has emerged (Akpınar, Aktamış ve Ergin, 2005; Frantom et al., 2002; Becker & Maunsaiyat, 2002; Tsai et al., 2001; McCoy, et. al., 2001; Gunter et al., 1998). In addition to this, it is assumed that the environment where students have been brought up and their parents' educational status may have some impacts on students' attitudes. In this respect, the present study investigates first-year pre-service science teachers' attitudes towards educational technologies and the effects of environment where they have been brought up and their parents' educational status on their attitudes.

In the present study, it was found that the general attitude of the pre-service science teachers' attitudes towards educational technologies is in the category of "Agree" and they have positive attitude. Moreover, it was found that the attitudes towards educational technologies do not significantly vary depending on the environment where they have been brought up. This result may indicate that whether the pre-service science teachers were brought up in rural or urban areas does not have any significant influence on their attitudes towards educational technologies. The pre-service science teachers may have been encouraged to make more use of internet through the project works or other homework

given in their former education and in this way they may have developed more positive attitudes towards educational technologies. Another finding of the present study is that there is no significant correlation between the parents' educational status and the pre-service science teachers' attitudes towards educational technologies.

But before making some generalizations in light of the findings of the present study, the limitations of the study should be mentioned. First, the present study is limited to its study group and data collection tools used in the present study. Therefore, further research may look at students from different departments, different faculties or different universities.

Utilization of educational technologies in the field of education can enrich education and enhance students' motivation, in this way; students are promoted to develop positive attitudes towards educational technologies. Positive attitudes developed by pre-service science teachers towards educational technologies may help them to make more efficient use of such technologies in their teaching.

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Social Engineering Theory: A Model for the Appropriation of Innovations with a Case Study of the Health MDGs

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1. Introduction

How do you get would-be mothers in tropical Africa to understand the importance of a life-saving innovation in science and technology like the use of impregnated mosquito nets to ward off deadly mosquito bites and so, reduce the rate of infant and maternal mortality? How do you get someone fettered by chains of ancestral traditional beliefs or bugged down by an excessive dose of brain washing (from whatever source) to change from consolidated negative attitudes to a positive attitude to innovative ideas and innovations desirable and beneficial to an emergent economy in the age of globalisation? How does one convince belligerent parties in a civil war or on a war path that there is a possible peaceful conciliatory solution to the conflict and they have an interest in being part of the solution and not part of the problem? How can we bring about a desired and salutary **change of mindset** so that a refractory colonial mentality can be replaced by a post-colonial mindset receptive to new and lofty ideals of participatory democracy, good governance and socio-economic-political change? The answer is probably **social engineering** through **attitude engineering** of some sort.

'Probably' because the correct answer, at this point, is really **'I wish we knew exactly how!'** What is certain, however, is that the frustrations currently experienced by Governments, Development Agencies of the United Nations system, Civil Society Organisations (CSOs) and Non-governmental organisations (NGOs) who find their putatively sound ideas and technologies rejected or spurned by target populations will reduce with a better understanding of what **appropriation** really entails. The poor results and below- expectation rates of implementation and slow progress in the attainment of development goals will reduce considerably if and when a solution is found to the problem of **effective adoption and appropriation** of development oriented **innovations**.

Although the world development agenda recognises **innovation** as a fundamental necessity in the development enterprise, the fundamental question in the implementation of the use of innovative technology by target populations is seldom asked. That question, in my considered opinion is, **'how does one get the target population to consider, accept, and adopt or appropriate an innovation?'** As indicated above, those who have attempted to ask

the question seem to have considered awareness or sensitisation campaigns to be the answer with the result that UN and governments have together with NGOs spent huge amounts of resources on *awareness campaigns* with varying results. In some cases, there is no commensurate measurable impact to justify the enormous resources spent on awareness campaigns. It is therefore important to better understand what is involved in **appropriation** since this holds promise for, *inter alia*, improving the implementation of the MDGs and other development initiatives crucially relevant to the process of social and economic transformation in the enterprise of national development. There is a need to institute a culture of the **effective use** of innovations in development endeavours in terms of appropriation or adoption of new and innovative ideas that constitute solutions to identified problems.

1.1 Research problem

In human interaction, accepting new ideas is not automatic. New ideas may meet with doubts, scepticism or apathy from the target audience and may ultimately receive a general disapproval, refusal or rejection which may be overt or covert, direct or indirect, veiled or unveiled. Faced with a novelty, reactions from interlocutors may vary from positive to negative, sometimes going through a neutral state of voluntary or involuntary indecision. The variation in attitudes and behaviours towards new ideas and new technologies from positive to negative is a fact of social reality irrespective of the validity, veracity or scientificity of the innovation. This state of affairs becomes critical and galling when evidence-based scientific and technological innovations in science and technology crucially relevant for personal and public health, food security, poverty reduction and national development are rejected by a preponderance of negative attitudes and negative responses from the targeted communities. Nowhere is this more evident than in the implementation of the millennium development goals (MDGs) in Africa and some areas of Latin America. The Global Monitoring Report (GMR) of the World Bank shows (with abundant statistics) that *“Sub-Saharan Africa lags behind on all MDGs including the goal for poverty reduction, though many countries in the region are now experiencing improved growth performance (GMR 2008:3)... On current trends, most African countries are off track to meet most of the MDGs”* (GMR 2008: 20-21). It has been shown that beyond glaring economic factors responsible for this state of affairs in part, the implementation of innovations in the enterprise of national development is hampered by socio-cultural factors and language and communication factors which negatively influence the rate and especially the degree of appropriation of innovations (See Chumbow 2009, 2010 and Bodomo1997 among others).

A study of the implementation of the Health MDGs (reduction of infant and maternal mortality, reduction of the incidence of HIV/AIDs and ‘roll back malaria’) in Cameroon shows that there was an overall reduction of less than 2% in five years from 2001-2006, despite the Ministry of Health’s efforts on awareness campaigns by teams of field workers armed with information guidelines to the population (Kayum 2012). This raises the fundamental question ‘what does it take for innovations to be effectively appropriated by the target population?’ This paper situates and elucidates this and related questions, squarely in the domain of **social engineering** as an Applied Social Science by proposing a model of appropriation informed by previous works and experience.

2. Social engineering and relevant concepts

The definition and clarification, in this section, of concepts such as **social engineering, awareness, innovations, attitude, appropriation and mindset (change)** will inform subsequent discussions of the issues relevant to the proposed model.

2.1 Social engineering

Social Engineering is the application of principles, techniques, methods and findings of social sciences to the solution of identified social problems, especially with respect to effecting change. Thus, social engineering concerns for example, the application of Karl Popper's 1945 methods of 'critical rationalism' in science to the problems of the 'open society'. **Social Engineering** is therefore an **Applied Social Science** in that knowledge in science is used to solve societal problems in the same way that knowledge of Mathematics, Physics etc. is used to solve problems in the domain of Engineering and knowledge of Biology and Chemistry used to solve health problems in the field of Medicine or Pharmacy.

From all considerations, a **social engineer** is one who tries to influence popular attitudes, social behaviours, and resource management on a large scale. Social engineering is the application of the scientific method for social concern. In other words, social engineers use the objective and principled methods of science to dissect, analyse, synthesize and understand social systems, so as to arrive at appropriate decisions from the view point of scientists, rather than as politicians. Thus, the major difference between politicians and social engineers is that scientists base decisions on careful evaluations and objectivity without differential advantage.

Concretely, the practice of social engineering as an **applied science** requires determining (by way of objective, scientific method or critical rationalism) certain 'engineering' specifications as ultimate values or ideal targets that must be met by individuals or collectivity/society and then proceeding to an orientation of attitudes and behaviours of individuals or groups in the direction of the desired specifications.

It is noteworthy that the term social engineering is polysemic in that it has other meanings and pejorative connotations. Social engineering in an entirely different meaning or semantic reading refers to *technological fraud*, such as internet scam, hacking tactics, etc. with an abundance of literature and scholarship on the subject. Secondly, a pejorative connotation is often introduced by some in the use of the term '**social engineering**' by considering the enterprise as a '**manipulation**' of individuals and/or groups to adopt alien attitudes and behaviours. However, Social Engineering as an applied social science, the object of the discussion in this chapter has nothing to do with these two derogatory concepts or shades of meaning.

The second reading of social engineering with the pejorative connotation of 'manipulation' may correctly describe and underscore observed practices involving the misuse of social engineering theory and practice. All engineering involves manipulation of some sort. However, manipulation to serve selfish interests, making individuals and society victims rather than beneficiaries of the social engineering process would, in the context of genuine social engineering, be a case of **malpractice**. Thus, the existence of such cases does not, to

my mind, militate against the emergence of a genuine social engineering theory and practice but simply underscores the need (as in the case of other applied sciences e.g. medicine), for the concomitant development of a code of ethics or a viable deontology of social engineering that will regulate both research and practice of social engineering to stigmatize and outlaw social engineering malpractice.

2.2 Awareness

Awareness is the perception or consciousness of some reality (concrete or abstract). Awareness, in other words, is thus the state or ability to perceive, to feel or to be conscious of events, objects or sensory patterns. Awareness, as a level of consciousness comes across as one where sense data can be confirmed by an observer without necessarily implying understanding. Awareness, according to the Oxford dictionary, is a 'state of elementary undifferentiated consciousness (<http://www.oxforddictionaries.com>). This, in effect, means that **awareness** can be overt or covert (subconscious) in the sense of knowing something without knowing it. Efforts to describe consciousness in neurological terms have focused on describing networks in the brain that develop awareness of the *qualia* developed by other networks. Interesting details of the biological (neuro-physiological) correlates of consciousness are not crucially relevant to this work. In ordinary language use, **awareness** may refer to the public or common knowledge (perception) of a social or political issue such as 'AIDS awareness', 'multicultural awareness', etc. **Awareness movements** proliferate in the form of Civil Society Organizations (CSOs) financed and encouraged by the consideration of **awareness** as an important factor in the solution of and mitigation of social ills and political problems. But to what extent is awareness a solution to social problems?

2.3 Innovation

'Innovation systems,' techno poles and technological parks constitute a significant pillar for the development of and propagation of science and technology in the present era of knowledge economies and knowledge societies (Chumbow 2011b). However, innovation in this paper refers to **the creation of new knowledge and better or more effective ideas, products, processes and technologies that are acceptable to society or government; more specifically, new knowledge in science and technology that is potentially beneficial to the community**. Innovations derive their pre-eminent value from their problem-solving capability and the possibility of effecting positive change, enhancing quality, efficiency, productivity and providing a competitive advantage. The competitive edge characteristic of innovations may be in the form of reduction of labour cost and environmental damage, or achievement of low energy consumption, etc.

2.4 Appropriation

This again is a polysemic word with many semantic readings or meanings and definitions. Appropriation may be envisaged as the process of taking possession of ideas principles, techniques or technologies or assigning renewed purpose to properties in knowledge, science and technology. The key words here are '*taking possession of*' (taking possession of something that is new and foreign). This definition is appropriate but not adequate. It does not go far enough to elucidate and illuminate the concept of appropriation. Indeed, what does

appropriation entail? Put differently, (in terms of our initial research question above) 'how does the target audience or population consider, accept, adopt and possess (or appropriate) the innovation? This work will contribute to answering this important question.

2.5 Attitude

Attitude is a well-known concept in the social sciences in general and in psychology in particular. The term takes a variety of different shades of meanings depending on whether one is in clinical psychology, social psychology or educational psychology, etc. (See for instance, Gardner 1984). However, the various semantic readings have a common core of shared features. From the literature we provide below a *practical definition* which highlights fundamental properties of 'attitude' derived from theories as experienced and practiced by psychologists, and other social and applied scientists.

Attitude is a propensity, predisposition or tendency to respond positively or negatively towards a certain idea, object, person or situation. Implicit in this definition is the fact that attitude influences an individual's choice of action and responses to stimuli (challenges, incentives, and rewards). Four major components or dimension of attitude are **affective** (emotions or feelings), **cognitive** (beliefs or opinions held consciously), **conative** (inclination for action) and **evaluative** (positive or negative response to stimuli). **Attitude according to some psychologists is a readiness or predisposition of a psyche to act in a certain way** (See, for instance, Carl Jung [1921] (1971). Attitude is therefore a psychological construct that represents an individual's degree of like or dislike for something. For Jung, these reactions are binary and come in pairs. They may be conscious or unconscious, implicit or explicit, rational or irrational, extraversions or introversions, etc.

2.6 Mindset

A mindset is a set of established assumptions, methods or notions held by one or more people or groups of people that determine their action and compel them to think and act in line with, or adopt and accept prior behaviour choices or tools. A mindset can thus be envisaged as a fixed mental attitude or disposition that determines a person's responses to and interpretation of situations

Clearly therefore, the key qualitative terms in the characterization of mindset are '**established**' and '**fixed**'. While attitudes are virtual predispositions in a state of **effervescence**, a mindset is a disposition that has crystallized and hence is fixed and established.

Ultimately, the task of social engineering as an applied social science with the rights, privileges and responsibilities of an applied science, is to cope with the challenge of **change of mindset** in a direction that is desirable, beneficial to the individual(s) and morally appropriate. In the age of knowledge economy, **mindset change** should not be and can no longer be the wishful thinking speculations of populist writers of 'success' books, but the object and subject of scientific investigation and empirical evidence predicated on a worthwhile theory or model. That is the task to which we have sought to place a stone for the edifice, that is the task to which social scientists of various disciplines and persuasions are called upon to contribute.

3. Model of innovation appropriation

3.1 Presentation of the model

The implementation of any innovation (for instance within the MDGs) involves new (scientific) knowledge and new technologies that have to be evaluated, understood, accepted and adopted as well as new ideas (often at variance with the culture and traditions of the people) that must be apprehended, comprehended and appropriated. Within this context, **innovations**, as already mentioned, are conceived of as the avalanche of new ideas, new knowledge and technologies that local communities have to cope with in the development process. The key issues in the implementation of a policy that entails adoption of an innovation are encapsulated in the following questions: How is the innovation to be conveyed to the masses of the rural population? How is comprehension of the innovation, its consequences and impact to be ensured? How does the innovation take root in the minds, in the hearts and in the lives of the people? In other words, how does the process effect a change of attitude, change of behaviour and/ or change of mind or mindset ?

In table 1 below, we present, motivate and discuss a design model of appropriation of innovations. The design benefits from some ideas of Cooper 1989 and Krashen 1981 and from our observations in the domain (Chumbow 1987, 1990, 2005, 2008, 2009, 2010). The six stages of the model underscore the fact that **the appropriation of an innovation is not an**

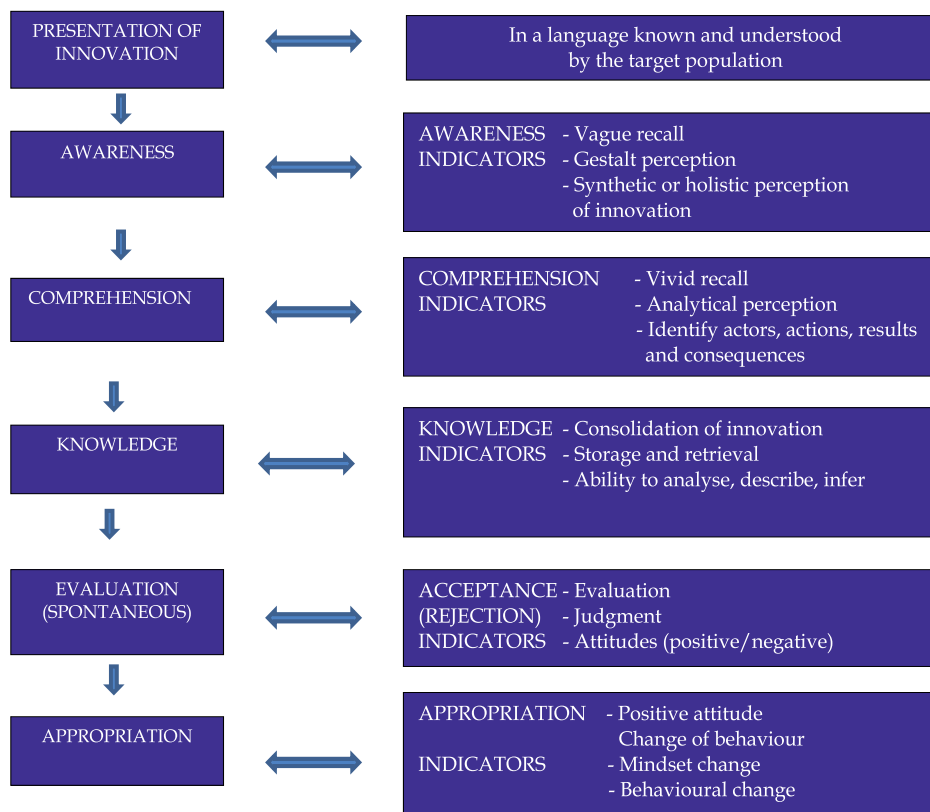


Table 1. A model for the innovation appropriation process.

event but a process that starts with the presentation of the innovation as **comprehensible input** in a language medium best understood by the target population and goes through varying phases from **awareness** of the innovation through, **comprehension, knowledge**, spontaneous **judgement** (evaluation), to adoption or appropriation. Each of these stages will be discussed in detail, each with a compendium of indicators postulated for each stage to characterise the stage and enable anyone to monitor at what stage the potential adopter is, in the appropriation process (to what extent the objectives are being achieved).

3.2 Discussion of stages

A discussion of the mental processes and activities involved in each stage of the appropriation paradigm is the object of this section.

3.2.1 Stage I: Presentation of Innovation

The innovation is presented to the target population in a language they can understand. If the object of the communication is to elicit a response from the population or trigger a reaction in a desired direction, it will serve no purpose to present the innovation in a language they cannot **comprehend** (from Latin *cum-prendre*: take along, take with). Translation and interpretation may be used but these have considerable limitations. (See for instance Kayum's 2012 findings on the limitations of translation as input medium).

3.2.2 Stage II: Awareness

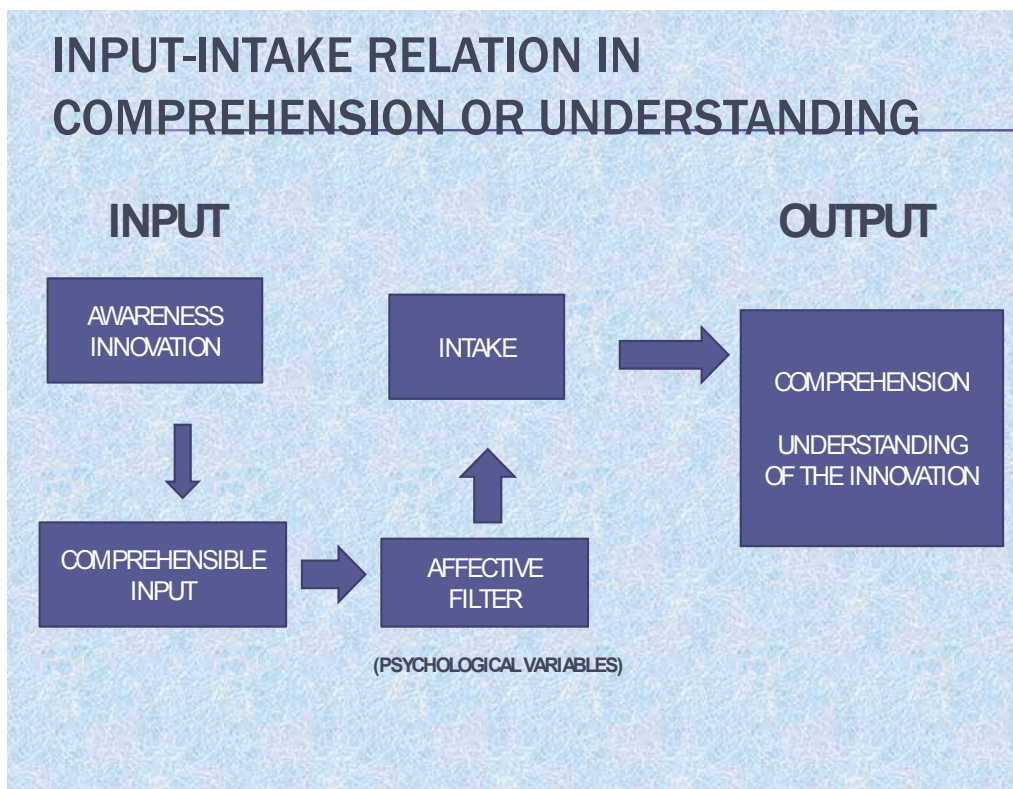
The contact with the novelty following its presentation, initially occasions, at least, an awareness of the innovation which is a superficial consciousness of the existence of the innovation. Although awareness is important as the gateway to the appropriation process, it is nevertheless only a superficial or a surface consciousness of the innovation as a new reality. Information that does not penetrate beyond the awareness level may produce indifference or superficial reaction of acknowledgement of the innovation only. The implication is that *awareness campaigns* are important but results can be guaranteed only when one aims further and beyond awareness.

The exact nature of Indicators of awareness may not be fully understood now but on the basis of what we know, they may be assumed to include: recall of the innovation in its general gestalt or holistic form, a synthetic perception or vague recall of the existence of some reality. (Further work is required from clinical and social psychologists to elucidate this and other relevant concepts further).

3.2.3 Stage III: Comprehension

This is patently the most central and the most significant level in the appropriation process in the sense that there is no chance of an innovation being accepted and adopted spontaneously and consciously if it has not been understood or comprehended. This stage therefore deserves special attention.

Comprehension itself is a process which can be modelled as presented below:



A model of the comprehension process central to the Appropriation Process, (adapted from Krashen 1981).

The Input Hypothesis postulated and motivated by Krashen (1981, 2003) holds that we acquire language only when we receive comprehensible input. Specifically, if i represent previously acquired linguistic competence (and extra -linguistic knowledge) that includes knowledge of the world and contextually relevant information, and if $+1$ represents new knowledge or language structures that we should be ready to acquire, then we move from the acquisition of i to the acquisition of $i + 1$ by understanding input that contains $i + 1$. Put simply, we acquire something new if the input to the acquisition process contains what we know plus something new, a little beyond what we know. The input hypothesis may be extended beyond language acquisition to include appropriation any novel idea information or technology.

As envisaged above, this underscores the fact that not all input is comprehensible and therefore, not all input leads to learning or acquisition. This should be quite uncontroversial for it simply means we cannot acquire, learn, adopt or appropriate what we are not capable of understanding or what we have not understood.

The innovation that goes beyond awareness is one that is understood because it is presented as comprehensible input to the target population or audience.

The innovation as comprehensible input is mediated by psychological variables that constitute what Krashen (1981, 2003) calls the “Affective filter” which includes *inter alia* the

frame of mind in which the target audience is at the moment of the communication. Thus, a frame of mind characterised by high anxiety, low self-esteem, and low motivation, etc. is likely to raise an invisible psychological wall that will block penetration of the input. However, if anxiety is low, and self-esteem and motivation are high and positive, this facilitates the penetration of the innovation-input so that input becomes intake. Once the innovation is taken-in as shown in the above diagram, there is evidence of comprehension in that the innovation is understood.

At this stage, we postulate indicators of **comprehension** to include the fact that the target audience can vividly, recall, and beyond recall can identify actors, actions, and results or consequences involved in the innovation. Thus, comprehension is achieved **by a more or less analytic perception of the new reality as opposed to the synthetic or holistic perception of the awareness level. Recall is more vivid as opposed to the vague recall of the awareness level.**

3.2.4 Stage IV: Knowledge

A comprehended innovation may still *evaporate* if it is not consolidated as “knowledge”. Knowledge is to “know” and keep what is known in the mind’s data-base and be capable of retrieving it with an appropriate cue as the key that unlocks the door to the store of knowledge. (In formulating this model, this stage benefits from insights from Cooper’s 1989 postulation of ‘knowledge’ as a relevant level in the dissemination of planned products of language planning). Epistemologically, we may ask the question, *how do we know that we know?* The key consideration in **knowledge** is the **consolidation** of the innovation with the ability to vividly recall, analyse, describe the innovation and make inferences relevant to elements and aspects of it, (among other things) as indicators of knowledge. For more epistemological questions on the foundations of knowledge see, for instance, Jung [1921] (1971), Russell (1948), Chomsky (1968) Popper (1975) and Stanley (2002).

3.2.5 Stage V: Evaluation (Judgment)

Even when an innovation is part of our repertoire of knowledge, individuals may have varying **attitudes and predispositions** vis-à-vis what they know.

This is because, between knowledge of an innovation and any reaction to that knowledge, there is a spontaneous **evaluation** of the innovation leading to a personal **judgement** that determines **acceptance** (if the judgement leads to a positive attitude) or **rejection** (if the judgement leads to a negative attitude). The acceptance of the new idea in the temple of the mind constitutes a climax, a *metanoia* (Greek for ‘change of mind’). The acceptance of the new idea or innovation may indeed be the result of a ‘change of mind’ or a conversion at the mental level following inputs in the process from the level of awareness. A change of mind in favour of the innovation is evidenced and backed by favourable dispositions and positive attitudes towards the innovation.

Indicators of this stage therefore include definite **attitudes** (positive or negative) towards the innovation. The judgement may not necessarily be ‘correct’. It may, indeed, be outrageously wrong. What is important and evident is that, faced with a new idea or product, judgements are made, attitudes developed and decisions taken (that may affect the mind-set and

behaviour). Acceptance does not always result from change of mind or *metanoia*. Only in situations where the innovation is at variance with a previously well-established position is acceptance of the innovation the outcome of a *metanoia*.

3.2.6 Stage VI: Appropriation of Innovation

Acceptance of the innovation is likely to lead to the appropriation of the innovation. Appropriation is evidenced not only by a **positive attitude** or disposition towards the innovation, but more importantly by personal action, action involving **behavioural change** congruent with the expectations of the proponents of the innovation.

The communication of an innovation that is intended to lead to appropriation must therefore be conscious of the role, function and impact of the (language) **medium of communication**, considering that the exigencies of **comprehension** as a central stage in the appropriation process require comprehensible input as a *sine qua non* condition. The effective implementation of the millennium development goals must therefore, go beyond awareness campaigns to ensure comprehension, and knowledge of the innovation and beyond that, undertake *attitude engineering* procedures (Chumbow 2009 and Chumbow 2011a) to polarise (negative) attitudes of the target group in favour of the innovation and ultimately, **monitoring** the process to elicit evidence of expected behavioural change which is the ultimate indicator of appropriation.

3.3 Indicators in the stages of the appropriation process

Indicators refer to evidence, pointers, or land-marks that show how well objectives are being achieved. They are elements that **'indicate'** the presence (or absence) of certain factors. Indicators are crucial in the operationalization of concepts and in the theory of appropriation developed here; indicators can ultimately be used to evaluate the level or degree of progress in an appropriation process.

The process of Appropriation of new ideas or technologies as conceived here is an empirical issue and what we present here cannot be considered complete. Further research will lead to refinement of the proposals, including indicators of the various postulated stages of the appropriation process. The need of research to establish indicators is borne out of the need to ultimately monitor the appropriation process by use of indicators to know at what stage in the process, a target population has arrived, and what needs to be done to enhance progress in the appropriation. In other words indicators are crucially relevant to the social engineering process geared towards change of attitude and change of behaviour. These indicators will show to what extent the social engineering objectives are being achieved.

There is no guarantee that a novel idea in any form, particularly an innovation in science and technology is immediately accepted and adopted once it is presented or communicated to the target audience. An innovation undergoes a *long journey* which may take it through several stages with the possibility that adverse factors may interrupt and abort progression at any level or stage of the journey, limiting the chances of the communicated input attaining its goal and achieving the expected effect in terms of outcomes and impact.

The task of **attitude engineering** in particular and **social engineering** in general concerns taking appropriate measures in a particular situation in ensuring that:

- i. a **high percentage** of 'input' becomes 'intake.'
- ii. *intake is provided with the 'facilities' necessary to maximise the emergence of most of the intake as output.*
- iii. Take note of the fact that what is processed is not necessarily input but intake
- iv. Etc.

To conclude this section, on the model, recall that in the critical last two stages, the potential adopter is brought to a 'metanoia', indicated by a positive attitude towards the innovation. Positive attitudes predispose one to *appropriation* which is evidenced by a powerful indicator, 'change of behaviour'. Thus, in our experience, social engineering resulting in the much desired '**change of mind set**' is best achieved through **attitude engineering** since the mind is not readily accessible. Attitude engineering or manipulations to change attitudes, putatively, will lead to a change of mind and change of behaviour. Similarly, an ideological input powerful enough to change the mind (set) will lead to change of attitude and ultimately change of behaviour. The correlation between **attitude**, **mindset** and **behaviour** is a reasonable assumption or claim we make as an empirical issue for the model.

Thus, **awareness campaigns**, the focus of development activities are ill conceived as a goal and finality, for, indeed, awareness is best envisioned as an initial stage in a long process of innovation appropriation.

While future research will contribute to the verification and edification of the much needed model of innovation appropriation, there are case studies that are congruent with and support the principal ideas of the above model, one of which is presented in the following section.

4. Case study: Language use and level of appropriation of innovations in Cameroon

The goal of the study by Kayum (2012) is to find out what medium of communication is used by health personnel in reaching out to target groups in the process of implementing the health millennium development goals (MDGs) in the multilingual setting of Cameroon, how this is done and how effective the process is in terms of appropriation of new ideas, techniques and technologies in the health sector by target populations. (It is useful to keep in mind, in terms of the linguistic situation, that Cameroon has French and English as official languages and over 260 indigenous languages which vary from one of the ten regions to another).

One of the four research objectives congruent with the above goal which will interest us particularly is presented by the researcher as follows:

- *"To find out the correlation between language use and the level of appropriation of the new ideas, knowledge and technologies of the Health MDGs by target population" (Kayum 2012: 6)*

The research question reflecting this objective is as follows:

- *"Does the use of the language mastered by the target population lead to a greater appropriation of new ideas, knowledge and technologies of Health MDGs?"*

This is formulated as a research hypothesis in the following terms:

- *The more communication is done in the language mastered by the target population, the greater the level of appropriation of the new knowledge and technology.*

To verify this hypothesis the research design involves working with a population sample of 564 persons who had actually participated in sensitization or awareness campaigns in one of the health MDGs (reduction of infant or maternal mortality, reduction of HIV/AIDS, 'roll back malaria', etc.). The sample drawn from three regions of Cameroon (Centre, West and East regions) was focused on the three capital cities of the regions (Yaounde, Bafoussam and Bertoua) each stratified to take into consideration urban versus rural communities, sex, age, and other relevant variables with respect to the other research objectives and research questions. Another sample of health officials (about 66) who actually conducted the awareness campaigns was part of the study to enable the researcher corroborate responses of the target population and verify other hypotheses (not directly relevant to the above hypothesis to be presented in this case study).

The instrument for data collection is a questionnaire administered and in some cases followed by (interpersonal oral) interview questions. The relevant questions from the appropriate section of the questionnaire that seek to verify the hypothesis will be presented along with discussions below.

Fifteen questions (15-29) seek to verify elements of the various stages of the appropriation process, from **presentation of new health information**, (innovations in science and technology) through **awareness to comprehension**. Five questions (30-34) seek to verify and ascertain facts and issues pertaining to the last three stages of the appropriation process from **Knowledge** (derived from the presentation) through **Evaluation and Judgments** made about received innovations to effective **Appropriation** of the innovations.

For the purpose of the verification of the hypothesis, a summary of relevant and crucial findings are presented here.

The research established that about 78% of the sensitization and workshops were carried out only in French and English, the official languages (OL) while about 20% was carried out in the official languages with interpretation and translation into the Cameroonian local languages i.e. non-official languages (NOL). Thus, virtually all presentation was done essentially in the OL with or without interpretation. The linguistic background of the 564 participants shows that those who spoke some form of the official language (French or English only, French and/or English along with a local language) were 396 and those who spoke no form of the official language (NOL) were 168. Details are presented in table 2 and reflected in chart 1 below.

Language	Bafoussam		Bertoua		Yaounde		Language total	% language distribution
	U	R	U	R	U	R		
OL	78	33	75	39	105	66	396	70.21
NOL	15	54	18	57	3	21	168	29.79
Town total							564	100

Table 2. Language distribution of OL/NOL.

Therefore, 70.21% of the respondents were OL speakers while 29.79% were NOL speakers.

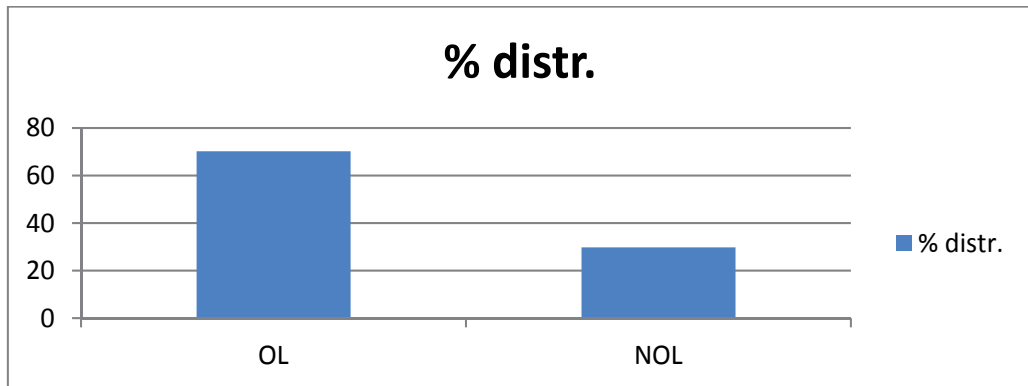


Chart 1. Language distribution of OL/NOL.

4.1 Language and comprehension

Concretely therefore, the research hypothesis is centred on finding out whether (since the language of presentation of new ideas and new practices and technologies in the health sector is the OL), those who master these languages (OL) comprehend and appropriate more than the non-official languages (NOL) speakers.

Comprehension was elicited by the simple question 'Did you understand the message of the campaign or workshop?'

Chart 2 below, shows that the percentage of those who claim to have understood the message of the innovations (in blue) is clearly higher than those who did not (red).

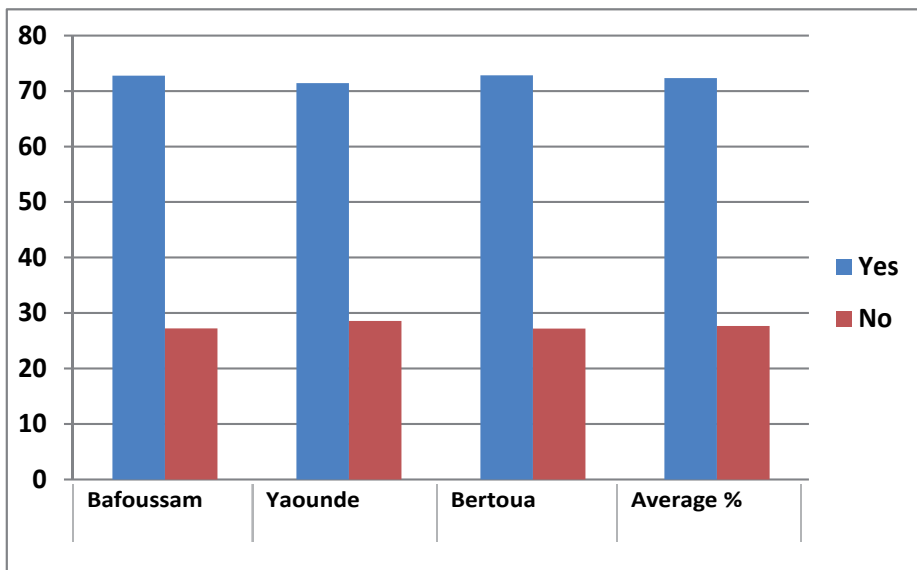


Chart 2. Comprehension level.

Beyond comprehension, it is important to know how well and to what degree. Chart 3 below, shows in terms of histograms, the **degree of comprehension** of the core messages of the awareness campaigns and workshops in percentages in the three localities. The fourth histogram (in violet colour) shows the average value for the locality.

The **degree of comprehension** is elicited by the question. ‘How well did you understand what was said during the programme?’ (Use the following frame :)

Excellent: I understood at least 90% of the message.

Good: I understood at least 70%.

Fair: I understood at least 50%.

Bad: I understood at least 30%.

Poor: I understood less than 30%.

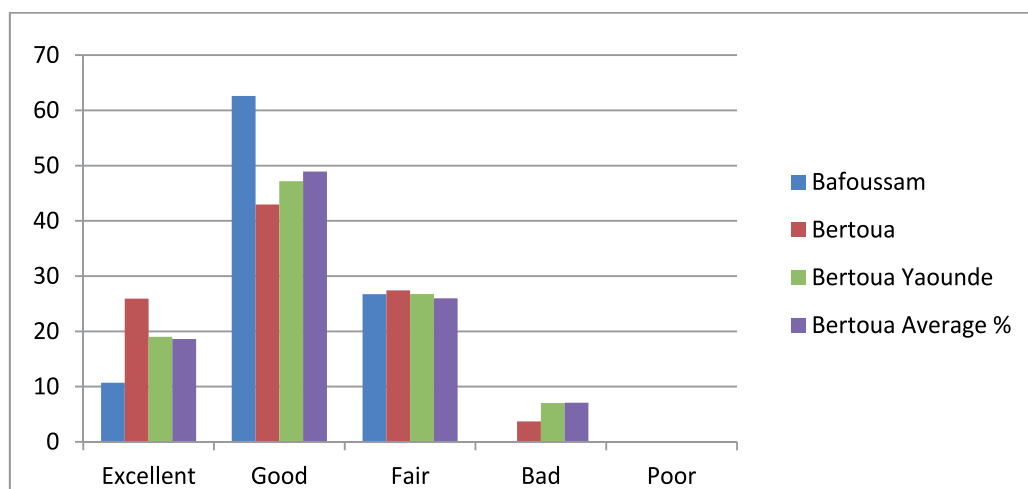


Chart 3. **Degree of Comprehension.**

When **comprehension** is considered in terms of the dichotomy that concerns our hypothesis i.e. official languages (OL) versus non official languages (NOL), the statistics are as attested in table 3 and reflected in charts 4 and 5 below.

Answer	Language	Bafoussam				Bertoua				Yaounde				Total	Average % distr.
		U	R	T	T%	U	R	T	T%	U	R	T	T%		
Yes	OL	67	23	90	68.70	66	23	89	65.93	84	51	135	95.07	314	76.96
	NOL	4	37	41	31.30	4	42	46	34.07	1	6	7	4.93	94	23.04
Answer Total				131	100			135	100			142	100	408	100
No	OL	11	10	21	42.86	9	16	25	46.30	21	15	36	67.92	82	52.56
	NOL	11	17	28	57.14	14	15	29	53.70	2	15	17	32.08	74	47.44
Answer Total				49	100			54	100			53	100		100

Table 3. **Distribution of Language Used and Level of Comprehension.**

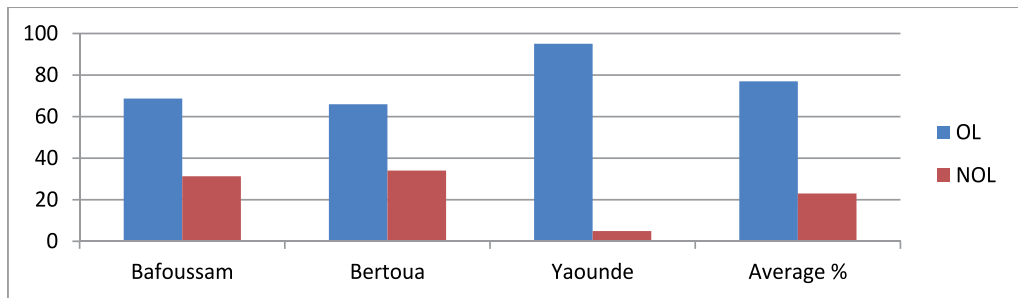


Chart 4. Bar Chart of Language Use and Percentage of Comprehension.

Chart 4 above, indicates the percentage of those from the OL and NOL groups who answered ‘Yes’ to the question of comprehension while chart 5 below shows the percentage of those who did not comprehend the message in both groups.

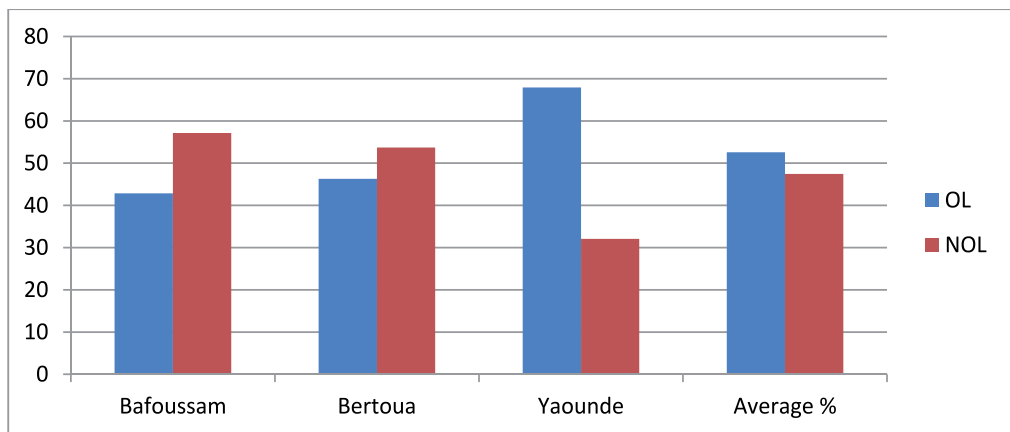


Chart 5. Bar chart of language Use and percentage of non-comprehension.

The above data (table 3), shows that of the 405 respondents who comprehended the message, 314 (76.96%) are of the OL category and 94 (23.03%) in the NOL category. These statistics ,in absolute terms, are largely in favour of comprehension by the OL.

When those who did not comprehend the message are considered, the absolute figures from table 3 reflected in chart 5, show that in absolute terms, more people in the NOL group did not understand in two of the three localities as can be seen in the Average in chart 5. (The Yaounde locality has more OLs who did not comprehend for reasons of exceptional factors of the paucity of rural population in the sample, this being the capital city as explained by Kayum 2012). On the average, in **absolute terms**, the percentage of OL is 52.36% to 47.44% for NOL (table 3 and chart 5).

This, on the surface appears to be paradoxical. However, when the figures are considered in **relative terms** (as they should), that is, when the numbers are considered relative to total population in each category, the OL figures are 20.84% (82/396 while the NOL figure is 44.05% (74/168). This indicates that in relative terms fewer respondents of the OL group had difficulties with comprehension of the message than respondents of the NOL group.

The above provides evidence to the effect that *the more communication is done in the language mastered by the target population, the greater the level of comprehension of new information and innovations*. Indeed, as observed by Kayum 2012: 78, ‘the majority of those who understood the new knowledge transmitted during the awareness campaign were OL speakers and the majority of those who did not understand are NOL speakers’. In other words, there is a correlation between mastery of **language of communication** and **comprehension** of new information in that language.

With respect to the level/degree of comprehension of information on innovations, charts 6 and chart 7 below summarise the facts for the OL and NOL.

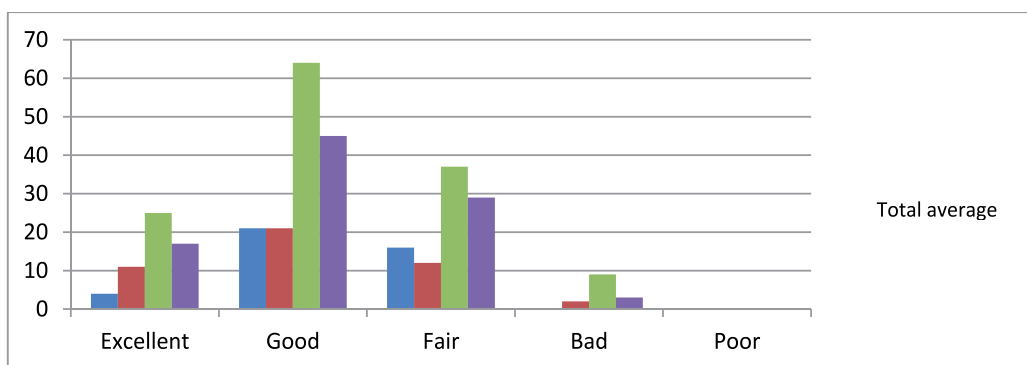


Chart 6. Degree or Level of comprehension within the OL Group.

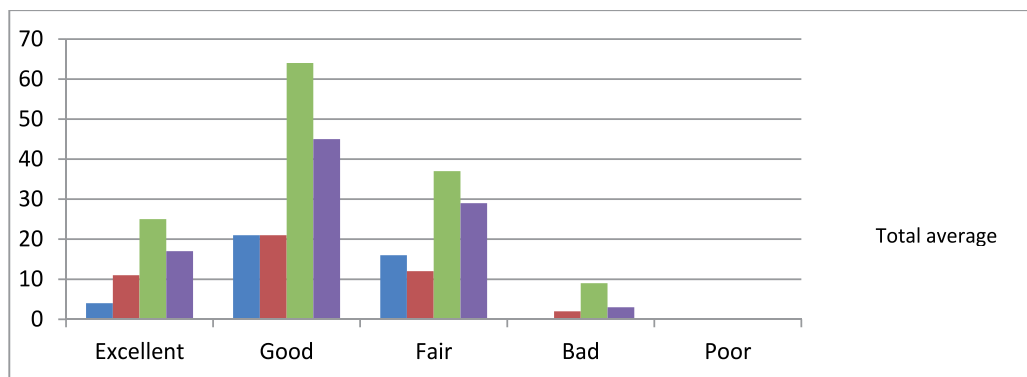


Chart 7. Degree or levels of Comprehension within the NOL Group.

In terms of **degree of comprehension**, a reasonable assumption to make is that the ‘Excellent’ and ‘Good’ levels constitute an above average level of comprehension that can be contrasted with the more doubtful evidence of comprehension (‘Fair, Bad and Poor). Within this perspective statistics reflected by charts 6 and 7 shows that 69.94 % attest an above average degree of comprehension in the OL group as opposed to 65.96 % in the NOL group. When a **t-test of significance** is done, it shows a p-value of 0.001731. Since normally a p-value of less than 0.05 is considered significant, it means the difference here is quite significant and should be interpreted to mean that *not only do more OLs comprehend the new*

health messages than the NOLs, their level of comprehension of the messages is significantly higher and better than that of the NOLs.

4.2 Language and appropriation

The second phase of the appropriation process starts with the stage of knowledge for which Chumbow 2010 proposed **retention** and **vivid recall** of information *etc. as indicators*

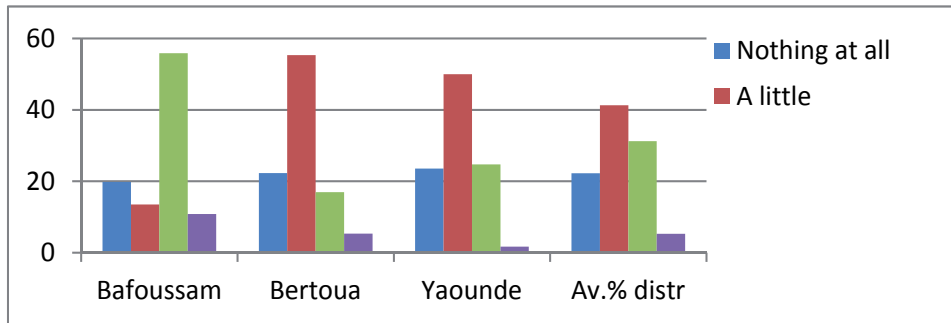


Chart 8. Level of Retention (OL).

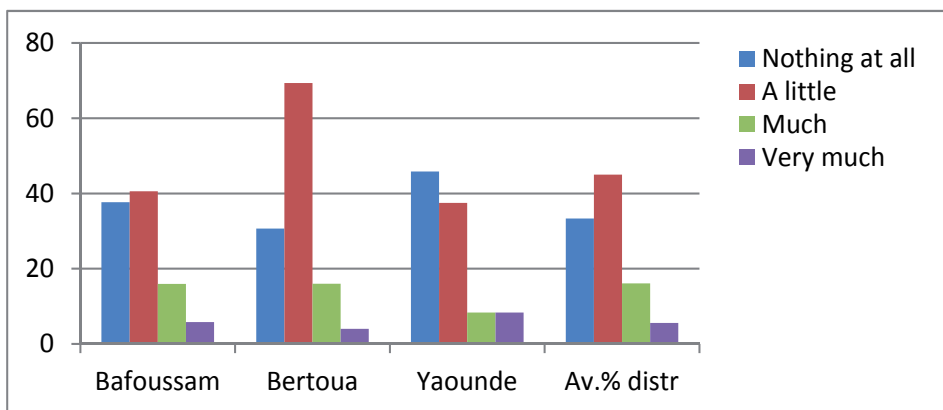


Chart 9. Level of Retention NOL.

As evidenced in charts 8 and 9 above, this case study measures the rate of retention of received innovation information and found that 36 % of OL speakers retained something new as opposed to 21 .67% for NOL. (This is the average of the 'very much' and 'much' variables). **The t-test results give a p-value of 0.011467 which is far less than 0.05, meaning that the difference in percentage of OL speakers and NOL speakers who retained much is quite significant.**

The next stage, involving reflection on the knowledge and value judgement is ascertained in this case study by elicitation of the **impressions** of respondents on the **importance** of the innovation. Also, evidence of the stage of appropriation (acceptance or rejection of innovations) to be discussed below, implies that judgement was made. Here again, the OL group exhibits a significantly better level of positive attitude than the NOL group.

Appropriation in this case study was elicited through a number of salient indicators such as (a)admission that new knowledge was acquired or learned, (b)sharing of some new knowledge learned with a third party, (c)personal application of innovation and ultimately, (d) behaviour change (as a result of contact with the innovation). In all these cases, available statistics following the same manner of contrastive display as above, show that the OL group has a significantly important and higher level than the NOL group (Kayum 2012: 86-97). In all cases, t-test results show that the OL versus NOL differences are in favour of OL and are statistically significant. Two illustrations would suffice.

Application of Knowledge: From those who admitted learning something new, 65.76% of OLs applied what they learned against 61.90 % for the NOL group. This is reflected in the bar charts¹⁰ and 11 below. In absolute terms, the difference of 3.86 appears to be of little significance but the t-test shows a p- value of 0.004417 which means that the difference is significant (but less significant than values for previous indicators). This means that other variables are at work. (These variables discussed in Kayum 2012 are not crucial here).

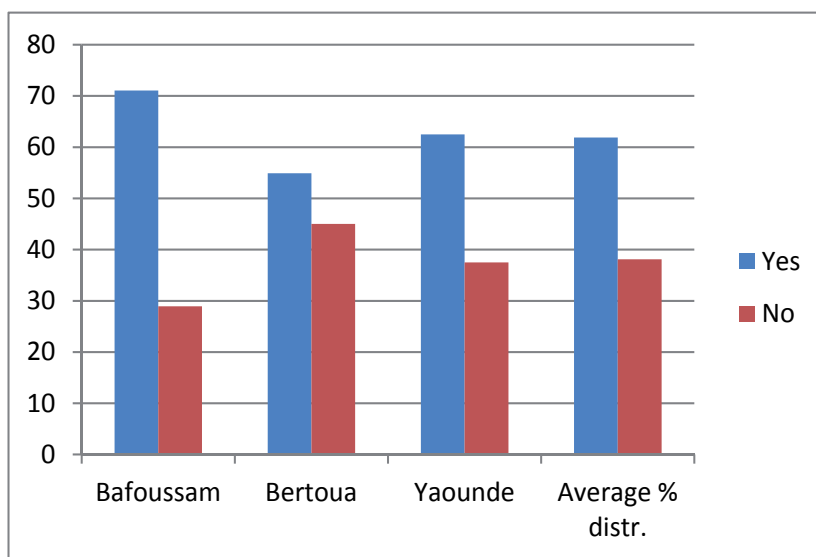


Chart 10. Application of new knowledge (OL).

Change of Behaviour: As chart 12 below indicates, some of the respondents effectively changed their attitude and behaviour after receiving new information and new knowledge from the sensitization campaign and workshop but less than 50% or exactly 43.09% are in this category. Change of behaviour in these circumstances is *prima facie* evidence of appropriation.

4.3 Comprehension versus appropriation

The results in charts 11 and 12 above raise a number of important questions on the correlation between comprehension and appropriation. To what extent do those who comprehend the message of the new knowledge and technology appropriate the innovation?

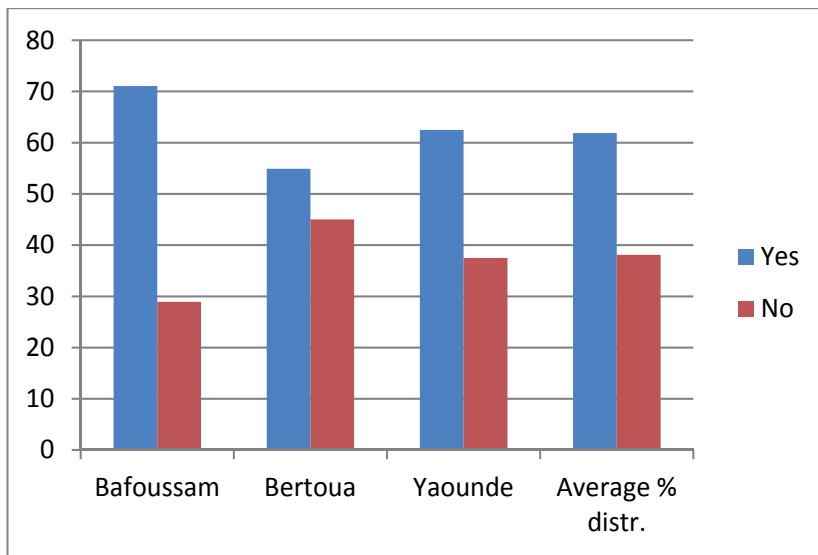


Chart 11. Application of new knowledge (NOL).

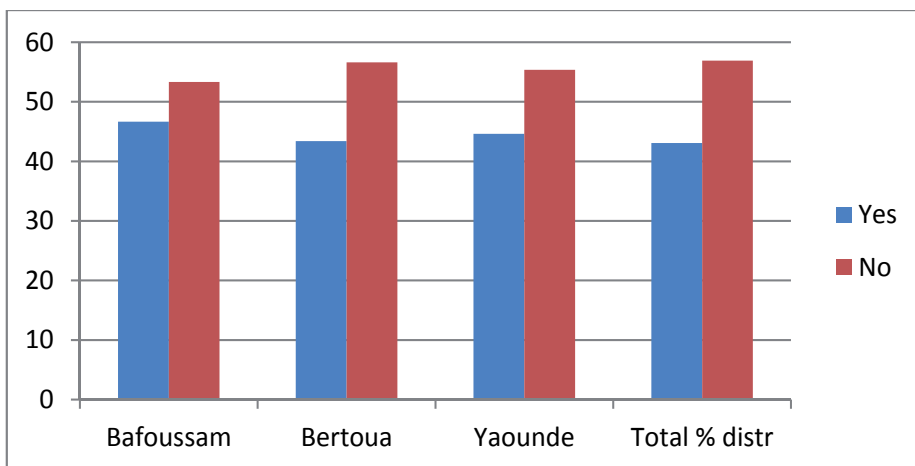


Chart 12. Change of behaviour (Indicator of appropriation).

The relevant figures as seen above are that 72.34% of the respondents comprehended the messages but only 43.09 actually showed evidence of appropriation of the message by change of behaviour congruent with the expected content of the innovation (chart 12). The contrast between level of comprehension and level of appropriation is evidenced by chart 13 below.

The fact of a glaring gap between comprehension and appropriation confirms and underscores assertion of Chumbow 2010 that ‘**comprehension is ‘a sine qua non condition for appropriation but not a sufficient condition’** in other words; language and comprehension are an indispensable but non-sufficient condition for appropriation to take place. While the message of the innovation must be presented as comprehensible input in a language known

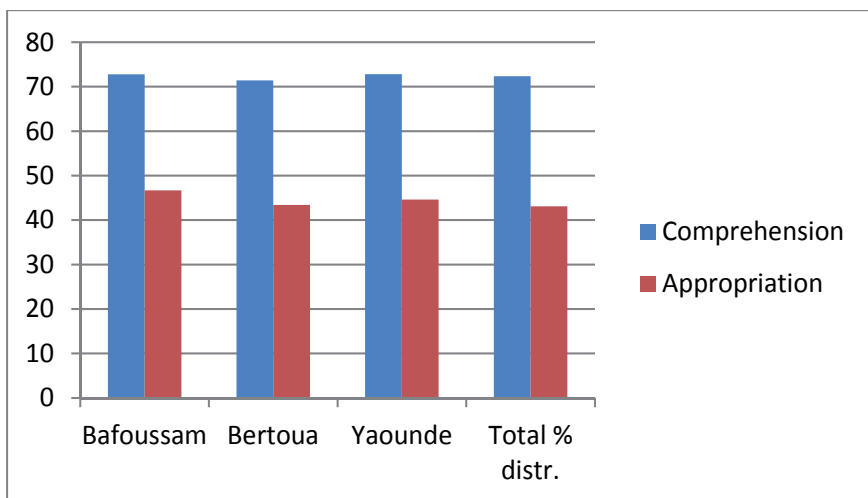


Chart 13. Levels of Comprehension versus Appropriation.

to the targeted audience, other variables may vitiate the process of appropriation of the novelty. These may include poverty (lack of resources to carry out what one believes in), cultural beliefs, practices and taboos as barriers, etc. These must be identified and analysed in order to effect **social engineering** that seeks to remove barriers and hurdles and polarize any negative attitudes in the desired direction of the change of attitude or change of behaviour required and expected by the innovation.

5. Implications for social sciences and national development

The most fundamental characteristic of the present millennium is that it is the age of 'knowledge economy' characterised by knowledge production, knowledge dissemination and knowledge appropriation. (Chumbow 2011b) Globalisation impacts make innovations from the science and technology (S&T) knowledge industries and Research-Development (R-D) innovation Parks available for acquisition and appropriation subject to economic considerations. While input constraints limit the quantity and quality of knowledge that can be created or produced by developing countries for the knowledge economy, developing countries can more readily appropriate available knowledge. The challenge in the heavily indebted poor countries and the developing countries aspiring to attain the status of emergent nations is first and foremost that of the appropriation of available innovations relevant for their national economy and national development industry while building the knowledge creation industry. The availability of and a better understanding and mastery of the appropriation model would be crucially relevant for the enterprise of national development. The development of social engineering principles in general and appropriation principles in particular by social scientists will prove to be crucially relevant to social and economic transformation of nations.

6. Conclusion

The case study does verify and illustrate the key issues of the innovation appropriation model which is the subject and object of this paper. It illustrates particularly, the

indispensability of the language factor in the comprehension and appropriation process of innovations but leaves room for unanswered questions with respect to some indicators of the stages and other variables that will need to be taken up by subsequent research sooner than later, given the importance of **appropriation** in the enterprise of development in particular and knowledge dissemination and knowledge appropriation in general.

In this regard, emphasis must be laid on the fact that all models and theoretical frameworks in their initial formulation are an **empirical issue** in at least two ways. Firstly, a theoretical model is not arbitrary but is based on some empirical observations of facts that give the model credence and its fundamental appeal with respect to explanatory adequacy of observed phenomena (Chomsky 1965).

Secondly, a theoretical model is an empirical issue because, at least, some of its postulates are amenable to and must be subjected to empirical research for verification, refinement and modification where warranted by empirical evidence from the field (and if need be, the entire paradigm can be jettisoned and replaced for lack of evidence and credibility).

It is in this second meaning that Khun's 1969 'Structure of Scientific Revolution' is justified in the sense that the subjection of theories to empirical fact finding leads to paradigm enrichment and consolidation or else to paradigm 'falsification' that in turn, leads to **paradigm shift**. (See also Popper 1975). Paradigm shifts are salutary developments in the growth of science because they may permit a break-through in the existing frontiers of knowledge and usher in new knowledge. . And, of course, the cumulative effect and avalanche of new knowledge is responsible for progress and humanity's present high level of development in the era of knowledge economy and information and communication technology. Therefore, the **model of appropriation of innovations** presented here will and should, of necessity, fulfil its destiny as an empirical issue.

7. References

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Stress Management for Medical Students: A Systematic Review

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1. Introduction

Tertiary education has always been regarded as highly stressful environment to students (Saipanish, 2003; Sherina et. al, 2003). Medical training further adds to the already stressful environment. Studies have revealed a high prevalence of psychological distress in medical students, ranging from 21.6% to 56% (Aktekin et al., 2001; Chandrasekhar et al., 2007; Dahlin et al., 2005; Firth, 1986; Guthrie et al., 1995; Miller & Surtees, 1991; Johari & Hashim, 2009; Saipanish, 2003; Sherina et al., 2003; Yusoff et al., 2011; Yusoff et al., 2010; Zaid et. al, 2007). Two studies in Malaysian government universities reported that 29.1 % to 41.9% of the medical students surveyed had psychological distress (Sherina et al., 2003; Yusoff et al., 2010) and another study in a Malaysian private medical school reported that 46.2% had psychological distress (Zaid et al, 2007). Apart from that, the stress level is higher in medical students compared to students in other courses. A study in Singapore reported that 57% of medical students had psychological distress compared to 47.3% of law students (Ko et al., 1999). Another study in Turkey reported that 47.9% of medical students had psychological distress compared to 29.2% of economic and physical education students as measured by GHQ (Aktekin et al., 2001). The alarming facts suggested that a sense of growing pressure on medical students.

The prevalence of psychological distress among year 1 medical students ranged from 17.6% to 50% (Aktekin et al., 2001; Guthrie et al., 1998; Sherina et al., 2003; Yusoff et al., 2011; Zaid et., 2007). The prevalence of psychological distress among year 2 medical students ranged from 36.5% to 47.9% (Aktekin et al., 2001; Sherina et al., 2003; Yusoff et al., 2010). The prevalence of psychological distress among year 3 medical students ranged from 29.8% to 40.5% (Sherina et al., 2003; Yusoff et al., 2010; Zaid et al., 2007). The prevalence of psychological distress among year 4 medical students ranged from 28.3% to 48.7% (Guthrie et al., 1998; Sherina et al., 2003; Yusoff et al., 2010; Zaid et al., 2007). The prevalence of stress among year 5 medical students ranged from 21.9% to 62.7% (Guthrie et al., 1998; Sherina et al., 2003; Yusoff et al., 2010; Zaid et al., 2007;). These facts showed that psychological distress were different depending on the stages of medical training (Yusoff et al., 2010).

Chronic exposure to stressful condition exerts negative effects on emotional, mental and physical well-being of the students. Numerous studies have revealed that persistence stressful condition associated with mental and physical health problems in medical students at various stages of their training (Aktekin et al., 2001; Firth, 1986; Guthrie et al., 1995; Miller and Surtees, 1991; Sherina et al., 2003; Zaid et. al, 2007). Studies reported an association of prolongeds psychological distress with lowered medical students' self-esteem (Silver & Glicker, 1990; Linn & Zeppa, 1984), anxiety and depression (Rosal et al., 1997; Shapiro et al., 2000), difficulties in solving interpersonal conflicts (Clark & Rieker, 1986), sleeping disorders (Niemi & Vainiomaki, 2006), increased alcohol and drug consumption (Flaherty & Richman, 1993; Newbury-Birch et al, 2000; Pickard et al., 2000), cynicism, decreased attention, reduced concentration and academic dishonesty (Liselotte et. al, 2005). It also associated with inhibition of students' academic achievement and personal growth development (Linn & Zeppa, 1984). Prolonged psychological distress was also linked with medical student suicide (Hays et al., 1996). As a result, medical students may feel inadequate and unsatisfied with their career as a medical practitioner in the future (Saipanish, 2003). It is noteworthy that many researchers stated the importance of early diagnosis as well as effective intervention programmes, that can prevent possible future mental illnesses among medical students (Aktekin et al., 2001; Firth, 1986; Sherina, 2003).

Studies revealed that the stressors affecting medical students' well being seems to be related to the medical training especially related to academic matters (Aktekin et al., 2001; Guthrie et al, 1995; Kaufman et al., 1996, 1998; Saipanish, 2003; Yusoff et al., 2011; Yusoff et al., 2010). They found that the top four stressors were tests and examinations, time pressure, too many content to be studied, and getting behind in work. Another three common stressors were conflicting demands, not getting work done within time planned and heavy workload. A small number of medical students suffer from personal problems, but the effect of this on medical students' psychological morbidity and academic success is unclear (Guthrie et al, 1995; Firth, 1986; Saipanish, 2003). Curriculum differences in medical schools may not necessarily cause differences in the overall pattern of stressors (i.e. most of the top stressors are related to academic matters), although frequency (rank) of some stressors may be significantly different (Kaufman et al., 1996, 1998).

It is worth to highlight that several medical education constituencies have emphasized the importance of teaching stress management and self-care skills to medical students (Steven et al., 2003; Susan et al., 2007). A recent literature review discovered that, although more than 600 articles addressed the importance of stress management programs in medical curricula, only 24 reported intervention programs with accompanying data; however none of the programmes provide convincing evidence of their effectiveness (Shapiro et al., 2000). Apart from that, their specific applications to medical education have been largely unexplored (Shapiro et al., 2000). Therefore a systematic review was done to evaluate the effectiveness of stress management specifically done on medical students with regard to five aspects which were 1) nature of participation, 2) research methods, 3) structure, facilitator and duration of intervention, 4) measured outcomes and instruments used to measure them and 5) outcomes of the intervention. On top of that we also categorized studies based on country.

2. Methodology

The literature search was performed using the Google Scholar, PubMed database, EbscoHost databases, Cochrane Library database, Scopus database, and Science Direct database. Keywords used in searching include 'medical student', 'stress management', 'medical student wellbeing', and 'stress intervention'. No time limit was specified in searching. Abstracts of the searched articles were read through for relevance. Participants, sampling method, study design, intervention structure, content and technique, and outcomes were the key issues of inclusion criteria for in-depth study of the full articles. Articles must describe stress management specifically for medical students otherwise they were not included in this review. Some of the articles were searched from the reference lists of the articles of primary search.

3. Results

Based on the keywords stated in the method, our search found that Google scholar database yielded over 1000 articles, Pubmed database yielded 275 articles, Cochrane Library database yielded 99 articles, EBSCO host database yielded 408 articles, Scopus database yielded 324 articles and Science Direct yielded 14 articles. However, based on abstract reading we found 28 articles fulfilled our inclusion criteria and they were selected for in-depth review. After the in-depth review 22 articles were included for review, 6 articles were excluded due to irrelevant content for current review. A new article was found from the reference list of the primary search and it was included in this current review. Approximately 23 articles were appraised and the results were summarised in tables. The earliest study was found in 1978 and the latest study was found in 2011. The earliest study was reported in 1978 (Soskis, 1978) and the latest study was reported in 2011 (Yusoff, 2011). Results of this systematic review were tabulated based on the five areas which were 1) nature of participants, 2) research methods (table 1), 3) structure, facilitators and duration of intervention (table 2), 4) measure outcomes and instrument used to measure them (table 3) and 5) outcomes of the interventions (table 4-8).

In general, participation of the interventions were categorized into random (i.e. selection of participants were made based on random sampling method) (Mitchell et al., 1983) and non-random (i.e. selection of participants were made based on non-random sampling method such as volunteer, convenient and purposive sampling method). Majority of the studies (i.e. 22 out of 23 studies) used non-random sampling method in selecting participants (Bughi et al., 2009; Finkelstein et al., 2007; Hassed et al., 2008; Hassed et al., 2009; Holtzworth-Munroe et al., 1985; Jain et al., 2007; Kelly et al., 1982; Kiecolt-Glaser et al., 1986; Klamen, 1997; Lee & Graham, 2001; MacLaughlin et al., 2010; Michie & Sandhu, 1994; Nathan et al., 1987; Rosenzweig et al., 2003; Redwood & Polak, 2007; Simard & Henry, 2009; Shapiro et al., 1998; Soskis, 1978; Whitehouse et al., 1996; Yusoff & Rahim, 2010; Yusoff, 2011; Zeitlin et al., 2000).

As shown in table 1, approximately 10 (43.48%) studies had no comparison groups (Bughi et al., 2009; Hassed et al., 2008; Hassed et al., 2009; Lee & Graham, 2001; Klamen, 1997; Redwood & Polak, 2007; Simard & Henry, 2009;; Soskis, 1978; Yusoff & Rahim, 2010; Zeitlin et al., 2000;) and 13 (56.52%) studies had comparison groups (Finkelstein et al., 2007; Holtzworth-Munroe et al., 1985; Jain et al., 2007; Kelly et al., 1982; Kiecolt-Glaser et al., 1986;

MacLaughlin et al., 2010; Michie & Sandhu, 1994; Mitchell et al., 1983; Nathan et al., 1987; Rosenzweig et al., 2003; Shapiro et al., 1998; Whitehouse et al., 1996; Yusoff, 2011). Out of 13, about seven studies randomly assigned participants to control and intervention groups (Holtzworth-Munroe et al., 1985; Jain et al., 2007; Kiecolt-Glaser et al., 1986; Mitchell et al., 1983; Nathan et al., 1987; Shapiro et al., 1998; Whitehouse et al., 1996). Out of the seven randomized control studies, only one study sampled their participants randomly (Mitchell et al., 1983). Even more only two studies (Jain et al., 2007; Yusoff, 2011) clearly mentioned about sample size calculation for the intervention and comparison groups while the rest of studies had not mentioned about it. The longest follow up duration for measurement of outcomes was 12 months (Nathan et al., 1987) and the shortest follow up duration for measurement of outcomes was immediately right after the intervention completed (Klamen, 1997; Redwood & Polak, 2007; Soskis, 1978; Zeitlin et al., 2000).

Study design (frequency)	Measurement of outcomes (frequency)	Source (arranged based on year of study)	Country (frequency)
Randomized controlled trial (7)	Four times: pre (1x) and post (3x) intervention	Nathan et al (1987) and Whitehouse et al (1996).	US (7)
	Three times: pre (1x) and post (2x) intervention	Holtzworth-Munroe et al (1985), Shapiro et al (1998), Jain et al (2007), and Mitchell et al (1983).	
	Two times: pre and post intervention	Kiecolt-Glaser et al (1986).	
Quasi-experimental: nonequivalent comparison group (6)	Three times: pre (1x) and post (2x) intervention	Michie & Sandhu (1994) and Finkelstein et al (2007).	US (4) UK (1) Malaysia (1)
	Two times: pre and post intervention	Kelly et al (1982), Rosenzweig et al (2003) and MacLaughlin et al (2010).	
	Two times: post (2x) intervention	Yusoff (2011).	
Quasi-experimental: time series without comparison group (10)	Three times: pre (1x) and post (2x) intervention	Simard & Henry (2009).	US (6) Australia (2) Canada (1) Malaysia (1)
	Two times: pre and post intervention	Klamen (1997) and Zeitlin et al (2000).	
	Two times: post (2x) intervention	Lee & Graham (2001), Hassed et al (2008), Hassed et al (2009), Bughi et al (2009) and Yusoff & Rahim (2010).	
	Once: post-intervention	Soskis (1978) and Redwood & Polak (2007).	

Table 1. Summary of research design, frequency measurement of outcomes and country of the 23 studies were conducted.

Approximately 34.8% (n=8) of interventions was offered as elective course, 26.1% (n=6) was offered as a seminar/workshop, 17.4% (n=4) was offered as a specific training/therapy, 8.7% (n=2) was offered as support group, 8.7% (n=2) was offered as a program built in the core curriculum and 4.3% (n=1) was offered as a volunteer program (table 2).

Structure (frequency)	Name of intervention	Number of Participant	Facilitator	Total Duration	Source and Country
Elective course (8)	The Meditation & Healing.	42: 1 st and 2 nd year medical students.	A Psychiatrist and Professional teachers.	Not mentioned.	Soskis (1978), US.
	The stress management training course.	96 to 103: 1 st year medical students.	Psychiatrists and Clinical Psychologist.	400 minutes over 8 weeks.	Nathan et al (1987), US.
	The stress management course.	69: 1 st clinical year (3 rd year) medical students	A Clinical Psychologist.	360 minutes over 3 weeks.	Michie & Sandhu (1994), UK.
	The Mindfulness Based Stress Reduction.	38: 1 st and 2 nd year medical students. 35: premedical students	Clinical Psychologists	1050 minutes over 7 weeks.	Shapiro et al (1998), US.
	The Help programme.	66: 1 st and 2 nd year medical students.	Physicians	360 minutes over 6 weeks.	Lee & Graham (2001), US.
	The Mind-Body Medicine: An Experiential Elective	32: 2 nd year medical students.	Not mentioned.	1200 minutes over 10 weeks.	Finkelstein et al (2007), US.
	The Brief Behavioural Intervention Program (BPIP)	34: 3 rd and 4 th year medical students.	Not mentioned.	Over one month duration.	Bughi et al (2009), US.
	The Mind Body Medicine Skills.	24: 1 st year medical students.	Faculty members.	1320 minutes over 11 weeks.	MacLaughlin et al (2010), US.
Volunteer program (1)	Student-led stress management program	1282 (over 16 years): 1 st year medical students. Average participant in a year was 80.	2 nd year medical students trained and guided by two Psychologists.	420 minutes over 7 weeks.	Redwood & Polak (2007), US.
Seminar/workshop (6)	Seminar	38: 1 st , 2 nd and 4 th year medical students. 10: residents and nurses	Four Clinical Psychologists.	360 to 540 minutes over 3 weeks.	Kelly et al (1992), US.

Structure (frequency)	Name of intervention	Number of Participant	Facilitator	Total Duration	Source and Country
	Workshop	40: 1 st and 2 nd year medical students.	A Clinical Psychologist.	360 minutes over 6 weeks.	Holtzworth-Munroe et al (1985), US.
	The stress management workshop	30: 1 st year medical students.	A Psychiatrist.	360 minutes over 3 weeks.	Klamen (1997), US.
	The Mindfulness Based Stress Reduction seminar	302 (1996-2000): 2 nd year medical students. Average participant in a year was 60.	Not mentioned.	900 minutes over 10 weeks.	Rosenzweig et al (2003), US.
	The Medical Student Wellbeing Workshop.	34: 2 nd , 3 rd , 4 th and 5 th year medical students.	Faculty members.	240 minutes over a half-day.	Yusoff & Rahim (2010), Malaysia.
	The Medical Student Wellbeing Workshop.	48: 1 st year medical students.	Faculty members.	240 minutes over a half-day.	Yusoff (2011), Malaysia.
Built in core curriculum (2)	The Health Enhancement Programme (HEP)	315: 1 st year medical students.	Not mentioned	1260 minutes over half of a semester.	Hassed et al (2008), Australia.
	The Health Enhancement Programme (HEP)	148: 1 st year medical students.	12 trained tutors.	1260 minutes over half of a semester.	Hassed et al (2009), Australia.
Support group (2)	Support group	38: 1st year medical students.	Two Clinical Psychologists.	400 minutes over 8 weeks.	Mitchell et al (1983), US.
	Support group	34: 1st year medical students	A Clinical Psychologist.	Not mentioned.	Kiecolt-Glaser et al (1986), US.
Specific training/therapy (4)	Self-hypnosis training	35: 1st year medical students	Two Psychiatrists	1260 minutes over 14 sessions throughout one semester.	Whitehouse et al (1996), US.
	Massage therapy	9: 1 st and 2 nd year medical students	Not mentioned	60 minutes one day before examination.	Zeitlin et al (2000), US.

Structure (frequency)	Name of intervention	Number of Participant	Facilitator	Total Duration	Source and Country
	Mindfulness Meditation- Somatic Relaxation	81 (divided into 3 groups which were Mindfulness, Somatic & Control): mixture of medical and allied health students.	Two mindfulness instructors and two relaxation instructors	360 minutes over 4 weeks.	Jain et al (2007), US.
	Yoga exercise	16: 1 st year medical students.	A certified yoga teacher.	1920 minutes over 16 weeks.	Simard & Henry (2009), Canada.

Table 2. Summary of structure, participants, facilitator and total duration of interventions of the 23 studies were conducted.

Approximately 43.5% (n=10) of interventions was conducted by Psychologist/Psychiatrist, 13% (n=3) by trained instructor, 13% (n=3) by faculty member, 4.3% (n=1) by medical student, 4.3% (n=1) by physician and 21.7% (n=5) was not reported (table 2).

The shortest duration of intervention was 60 minutes as massage therapy over an afternoon (Zeitlin et al., 2000) and the longest duration of intervention was 1920 minutes (32 hours) over a 16-week yoga exercise (Simard & Henry, 2009). However majority of intervention (n=9) utilised 360 to 540 minutes over 3 to 8 weeks (table 2).

The smallest and biggest number of participants involved in an intervention were 9 (Zeitlin et al., 2000) and 315 (Hassed et al., 2008) respectively. However, majority of those studies (n=12) had involved 30 to 50 participants in an intervention (table 2).

Most of studies (n=11) measured participants' perception on acceptability and feasibility of stress management interventions using evaluation questionnaire at the end of the interventions (table 3). Items of the evaluation questionnaires used were different between studies depending on objectives of the interventions. Despite of the differences, this fact clearly suggested that perception of participants towards feasibility and acceptability of stress management interventions were considered as one of important outcomes of the interventions. Apart from participants' feedback on acceptability and feasibility of the interventions, there were three other most common measured outcomes that were considered as major indicators of effectiveness of stress management interventions regardless of its types which were anxiety (n=14), depression (n=13) and psychological distress (n=10) as shown in table 3. Majority of studies (n=7) measured anxiety level among participants using the State-Trait Anxiety Inventory (STAI) followed by the Brief Symptom Inventory (BSI) (n=3), the Anxiety Subscale of Symptom Checklist Revised (n=2), The Depression Anxiety Stress Scale (n=1) and other inventories (table 3). Depressive symptoms were mostly measured by the Brief Symptom Inventory (BSI) (n=3) and the Depression Subscale of Symptom Checklist Revised (n=3) followed by the Beck Depression Inventory (n=1), the Depression Anxiety Stress Scale (n=1) and others inventories (table 3).

Outcomes Measured (frequency)	Instrument (frequency)	Source
Students' perception on feasibility and acceptability of intervention (11)	Evaluation Questionnaire (11)	Soskis (1978), Nathan et al (1987), Michie & Sandu (1994), Klamen (1997), Shapiro et al (1998), Lee & Graham (2001), Rosenzweig et al (2003), Redwood & Polak (2007), Hassed et al (2008), Simard & Henry (2009), Yusoff & Rahim (2010).
	Interview (1)	Soskis (1978).
	Essay (1)	Lee & Graham (2001).
Psychological Distress (10)	Rating scales of the frequency and intensity of weekly tension and depression (1)	Holtzworth-Munroe et al (1985),
	Social Readjustment Rating Scale (1)	Nathan et al (1987),
	Distress subscale of Symptom Checklist Revised (SCL-90R) (2)	Shapiro et al (1998), Hassed et al (2008),
	Visual Analogue Perceived Stress (1)	Zeitlin et al (2000),
	Perceived Stress of Medical School (1)	Finkelstein et al (2007),
	General Health Questionnaire 12 item (2)	Simard & Henry (2009), Yusoff & Rahim (2010)
	Perceived Stress Scale (1)	Simard & Henry (2009),
	Saliva Cortisol Level (1)	MacLaughin et al (2010)
	Saliva Dehydroepiandrosterone-sulfate (DHEA-S) level (1)	MacLaughin et al (2010)
	Saliva Testosterone level (1)	MacLaughin et al (2010)
	Saliva Secretary Immunoglobulin A (sIgA) level (1)	MacLaughin et al (2010)
Anxiety (14)	Depression Anxiety Stress Scale 21-item (1)	Yusoff (2011)
	State-Trait Anxiety Inventory (7)	Kelly et al (1982), Mitchell et al (1983), Holtzworth-Munroe et al (1985), Nathan et al (1987), Michie & Sandu (1994), Shapiro et al (1998), Zeitlin et al (2000),
	Rating Scales of Anxiety and Intensity in Test and Social Situation (1)	Holtzworth-Munroe et al (1985),
	Brief Symptom Inventory (3)	Kiecolt-Glaser et al (1986), Whitehouse et al (1996), Jain et al (2007).
	7 Questions covered on anxiety, depression and satisfaction (1)	Michie & Sandu (1994).
	Anxiety subscale of Symptom Checklist Revised (SCL-90R) (2)	Finkelstein et al (2007), Hassed et al (2009).
	Anxiety subscale of General Well Being Scale (1)	Bughi et al (2009).
Depression Anxiety Stress Scale 21-item (1)	Yusoff (2011).	

Outcomes Measured (frequency)	Instrument (frequency)	Source
Depression (13)	Beck's Depression Inventory (1)	Mitchell et al (1983).
	Rating scales of the frequency and intensity of weekly tension and depression (1)	Holtzworth-Munroe et al (1985).
	Brief Symptom Inventory (3)	Kiecolt-Glaser et al (1986), Whitehouse et al (1996), Jain et al (2007).
	Depression Adjective Checklist (1)	Nathan et al (1987).
	7 Questions covered on anxiety, depression and satisfaction (1)	Michie & Sandu (1994).
	Depression subscale of Symptom Checklist Revised (SCL-90R) (3)	Shapiro et al (1998), Hassed et al (2008), Hassed et al (2009).
	2-item Depression Index (1)	Finkelstein et al (2007).
	The Center of Epidemiologic Studies Depression (CES-D) scale (1)	Simard & Henry (2009).
	Depression subscale of General Well Being Scale (1)	Bughi et al (2009).
	Depression Anxiety Stress Scale 21-item (1)	Yusoff (2011).
Loneliness (3)	UCLA Loneliness scale (3)	Kiecolt-Glaser et al (1986), Nathan et al (1987), Whitehouse et al (1996).
Mood state (3)	Profile of Mood States (POMS) (3)	Whitehouse et al (1996), Rosenzweig et al (2003), Finkelstein et al (2007).
Quality of life (2)	WHOQOL (2)	Hassed et al (2008), Hassed et al (2009)
Type A behaviour (2)	Jenkins Activity Schedule (2)	Kelly et al (1982), Nathan et al (1987)
	Bortner's short rating scale of Type A behaviour (1)	Nathan et al (1987)
Physiologic & Immunologic Health marker (3)	Helper/Inducer T Lymphocytes (2)	Kiecolt-Glaser et al (1986), Whitehouse et al (1996)
	Suppressor/Cytotoxic T Lymphocytes (2)	Kiecolt-Glaser et al (1986), Whitehouse et al (1996)
	Total Iron-Binding Protein (TIBC) (1)	Kiecolt-Glaser et al (1986),
	Transferrin (1)	Kiecolt-Glaser et al (1986),
	Albumin (1)	Kiecolt-Glaser et al (1986),
	Natural Killer Cell (NK-cell) (3)	Kiecolt-Glaser et al (1986), Whitehouse et al (1996), Zeitlin et al (2000)
	B Lymphocytes (1)	Whitehouse et al (1996)
	Monocytes (1)	Whitehouse et al (1996)
	Granulocytes	Whitehouse et al (1996)
	Total White Blood Count (1)	Zeitlin et al (2000),
	Mitogen-Induced Lymphocyte Stimulation (1)	Zeitlin et al (2000)

Outcomes Measured (frequency)	Instrument (frequency)	Source
	Respiratory Rate (1)	Zeitlin et al (2000)
	Blood Pressure (1)	Zeitlin et al (2000)
	Body Temperature (1)	Zeitlin et al (2000)
	Pulse Rate (1)	Zeitlin et al (2000)
Spiritual Experience (2)	INSPIRIT (2)	Shapiro et al (1998), Jain et al (2007)
Empathy (1)	Empathy Construct Rating Scale (1)	Shapiro et al (1998)
General Wellbeing (1)	General Well Being Scale (1)	Bughi et al (2009)
Academic performance (3)	Grade Point Average (3)	Mitchell et al (1983), Kiecolt-Glaser et al (1986), Nathan et al (1987).
Positive Psychological State (1)	Positive States of Mind Scales (1)	Jain et al (2007)
Self-esteem (1)	A Self-Esteem Measure (1)	Holtzworth-Munroe et al (1985)
Personality (3)	Minnesota Multiphasic Personality Inventory (2)	Mitchell et al (1983), Nathan et al (1987),
	16 Personality Factor Test (1)	Kiecolt-Glaser et al (1986)
Distractive & Ruminative thought (1)	Daily Emotion Report (1)	Jain et al (2007)
Knowledge of stress & its management (1)	Stress Knowledge Inventory (1)	Kelly et al (1982)
Perceived stressors (2)	Stressful Situations Rating (1)	Kelly et al (1982)
	Hassles Scale (1)	Nathan et al (1987)
Intrinsic & Extrinsic Satisfaction (1)	7 Questions covered on anxiety, depression and satisfaction (1)	Mitchie & Sandu (1994)
Quality of sleep (1)	Daily Dairies (1)	Whitehouse et al (1996)
Hypnotic ability (1)	The Harvard Group Scale of Hypnotic Susceptibility (1)	Whitehouse et al (1996)
	The Inventory of Self-Hyponosis (1)	Whitehouse et al (1996)
Preferred specialty choice (1)	Questionnaire on procedural and non-procedural specialty (1)	Klamen (1997)
General Health Status (2)	Self-Reporting questionnaire (1)	Kiecolt-Glaser et al (1986),
	Health Chart (1)	Nathan et al (1987)
	Duke-UNC Health Profile (1)	Nathan et al (1987)

Table 3. Summary of measured outcomes and instruments used to measure them.

Psychological distress level was measured by mostly by General Health Questionnaire 12-item (n=2) and the Distress Subscale of Symptom Checklist Revised (n=2) followed by the Depression Anxiety Stress Scale (n=1) and other inventories (table 3).

Despite of the four most common measured outcomes (i.e. students' perception, anxiety, depression and psychological distress), they were other important outcomes to be considered in future research such as loneliness (n=3), mood states (n=3), academic performance (n=3), health biomarkers (n=3), quality of life (n=2) and general wellbeing (n=1) (table 3).

Outcomes of interventions were summarized based on five categories which were brief intervention (less than 2 days), short-duration intervention (2 days to 4 weeks), medium-duration intervention (more than 4 weeks and up to 8 weeks), long-duration intervention (more than 8 weeks) and other (duration was not mentioned in the articles).

There were three brief interventions reported by previous studies (table 4) and all of them had significant positive impacts on psychological health of medical students (table 4). The massage therapy improved immunologic and physiologic health marker (Zeitlin et al., 2000). While the Medical Student Wellbeing Workshop improved awareness of participants about stress, its effect and management as well as a well-accepted intervention by participants (Yusoff & Rahim, 2010).

Source and Country	Name of intervention	Outcome	Summary of outcome (n)
Zeitlin et al (2000), US.	Massage therapy	- Reduced respiratory rate - Decreased anxiety state. - Decreased perceived stress - Decreased percentage of T Lymphocyte cells post intervention - Increased natural killer cell activity post intervention.	- Improved psychological health (3) - Improved immunologic health marker (1) - Improved physiologic health marker (1)
Yusoff & Rahim (2010), Malaysia.	The Medical Student Wellbeing Workshop	- Reduced distress symptoms. - Well accepted intervention. - Rated as highly useful and successful intervention. - Increased awareness about stress, its effect and management.	- Increased awareness about stress and management (1) - Well accepted intervention (1)
Yusoff (2011), Malaysia.	The Medical Student Wellbeing Workshop	- Reduced anxiety level - Reduced depressive symptoms. - Reduction of distress symptoms. - Sustainability of those effects	

Table 4. Outcomes of brief stress management intervention (required duration of less than 2 days)

Five short-duration interventions were reported by previous studies (table 5). About three interventions were reported to have significant positive impacts on psychological health of medical students (Bughi et al., 2009; Jain et al., 2007; Michie & Sandhu, 1994) whereas other outcomes were different from each intervention (table 5). Nevertheless, these facts had provided evidence of positive impacts of short-duration intervention on medical students' psychological health, awareness and general wellbeing.

There were six medium-duration interventions reported and most of them were well accepted by medical students as well as increased awareness of the students about handling

Source and Country	Name of intervention	Outcome	Summary of outcome (n)
Kelly et al (1982), US.	Seminar	<ul style="list-style-type: none"> - Reduction of type A behaviour pre and post intervention. - Increased knowledge about stress, its effect and management. - Reduced stressful intensity perception of stressful events. - No measureable of anxiety state. 	<ul style="list-style-type: none"> - Improved psychological health (3) - Increase awareness on stress, its effect and management (2) - Well accepted intervention (2)
Michie & Sandhu (1994), UK.	The stress management course	<ul style="list-style-type: none"> - Increased intrinsic and extrinsic satisfaction. - Positive perception towards the intervention. - Increase awareness on stress, its effects and management. - Reduction of anxiety and depression symptoms pre and post intervention. 	<ul style="list-style-type: none"> - Increased knowledge on stress, its effect and management (1) - Reduced stressful perception toward stressor (1) - Increased self-satisfaction (1)
Klamen (1997), US.	The stress management workshop	<ul style="list-style-type: none"> - Well accepted course. - Increased interest to consider a career in psychiatry. - The intervention was very helpful in providing insight about stress and health. 	<ul style="list-style-type: none"> - Influenced career choice (1) - Enhanced positive state of mind (1) - Reduced negative positive state of mind (1)
Jain et al (2007), US.	Mindfulness Meditation-Somatic Relaxation	<ul style="list-style-type: none"> - Reduced ruminative thought and behaviour. - Reduced distractive thought and behaviour. - Reduced psychological distress symptoms. - Enhanced positive state of mind. - Reduced negative psychological state 	<ul style="list-style-type: none"> - Reduced ruminative and distractive thought (1) - Increased positive wellbeing (1)
Bughi et al (2009), US.	The Brief Behavioural Intervention Program (BPIP)	<ul style="list-style-type: none"> - Decreased anxiety level. - Increased positive wellbeing score. - No measureable effect on depression, self-control, vitality and general health. - Reduced prevalence of reported stress post intervention. 	

Table 5. Outcomes of short-duration stress management intervention (required duration of 2 days to 4 weeks)

stress (table 6). However other outcomes were different from each intervention. Among the interventions, the Mindfulness Based Stress Reduction demonstrated very positive impacts on medical students' psychological health, empathy and spirituality (Shapiro et al., 1998). Nonetheless, these facts had provided evidence of positive impacts of the medium-duration intervention on medical students' psychological health, empathy, spirituality, awareness related to handling stress as well as general wellbeing (table 6).

Source and Country	Name of intervention	Outcome	Summary of outcome (n)
Mitchell et al (1983), US.	Support group	<ul style="list-style-type: none"> - No measureable effect on academic performance. - No measureable effect on anxiety or depression level. - No measureable effect of stress symptomatology. - No measureable effect on personality. 	<ul style="list-style-type: none"> - Well accepted intervention (5) - Increased awareness on stress, its effect and management (3). - Reduced type A behaviour (1) - Improved psychological health (1).
Holtzworth-Munroe et al (1985), US.	Workshop	<ul style="list-style-type: none"> - Increased awareness about stress, its effect and management - Positive perception toward the intervention. - No measureable effect on anxiety, depression and self-esteem. 	<ul style="list-style-type: none"> - Increased empathy (1) - increased spirituality feeling (1)
Nathan et al (1987), US.	The stress management training course	<ul style="list-style-type: none"> - Reduced hard-driving scale score of type A behaviour. - Positive perception towards the intervention. - No measureable effects on academic performance, general health, personality, stress symptoms, depression, anxiety, stressful intensity perception of stressor, and loneliness. 	
Shapiro et al (1998), US.	The Mindfulness Based Stress Reduction	<ul style="list-style-type: none"> - Well accepted intervention evidence by high rate completion. - Reduced in depressive symptoms. - Reduced anxiety state. - Increased in empathy - Increased in spirituality feelings. - Reduced in psychological distress symptoms. 	
Lee & Graham (2001), US.	The Help programme	<ul style="list-style-type: none"> - Positive feedback and well accepted intervention. - Increased insight about the need for self-care. - Increased awareness about stress, its effect and management. 	
Redwood & Polak (2007), US.	Student-led stress management program	<ul style="list-style-type: none"> - Well accepted as attendance rated more than 85%. - Useful and valuable intervention. - Increased stress management skills. 	

Table 6. Outcomes of medium-duration stress management intervention (required duration of more than 4 weeks and up to 8 weeks).

There were seven long-duration interventions reported and most of them had significant positive effects on psychological health of medical students as well as they were well accepted by the students (table 7) while other outcomes were varied from each intervention ranging from increased awareness about stress management and it's important to improved immunologic health markers. Among these interventions, the Mind Body Medicine Skills

showed very good impacts on medical students' stress biomarkers such as Cortisol, DHEA-S and testosterone (MacLaughlin et al., 2010). In general, the outcomes of these interventions were related to improvement of psychological health, stress biomarkers, immunologic health marker, awareness about stress and its management, and general wellbeing (table 7).

Source and Country	Name of intervention	Outcome	Summary of outcome (n)
Whitehouse et al (1996), US.	Self-hypnosis training	<ul style="list-style-type: none"> - Reduction of anxiety level during examination period. - Improved quality of sleep. - No measureable effect on loneliness state. - Lowered number of T Lymphocyte at the late semester. - Lowered stressful intensity perception towards stressful events. 	<ul style="list-style-type: none"> - Improved psychological health (5) - Well accepted intervention (3) - Increase awareness on stress, its effect and management (2). - Improved sleep quality (1)
Rosenzweig et al (2003), US.	The Mindfulness Based Stress Reduction seminar	<ul style="list-style-type: none"> - Reduction of tension-anxiety, fatigue-inertia and confusion-bewilderment scores. - Increased vigor-activity scores. - Improved psychological health. - Rated as a very helpful intervention. - Increased insight about their stresses. - Increased confidence in handling stressful situations. 	<ul style="list-style-type: none"> - Improved immunologic health marker (1) - Reduced stressful perception toward stressor (1) - Improved quality of life (1) - Reduced hostility (1) - Improved stress biomarkers (1)
Finkelstein et al (2007), US.	The Mind-Body Medicine: An Experiential Elective	<ul style="list-style-type: none"> - Reduction of anxiety level - No measureable effect on mood state, depressive symptoms and perceived stress - Developed skills that allow coping effectively with stressful situations. 	<ul style="list-style-type: none"> - Improved mood disturbances (1)
Hassed et al (2008), Australia.	The Health Enhancement Programme (HEP)	<ul style="list-style-type: none"> - Well accepted intervention. - Rated as useful intervention. - Reduced depression, anxiety and hostility during stressful period. - Improved quality of life. 	

Source and Country	Name of intervention	Outcome	Summary of outcome (n)
Hassed et al (2009), Australia.	The Health Enhancement Programme (HEP)	<ul style="list-style-type: none"> - Reduced depressive symptoms - Reduced hostility scale. - Improved psychological distress symptoms. - No measureable effect on anxiety - Improved psychological domain quality of life. - No measureable effect on physical domain of quality of life. 	
Simard & Henry (2009), Canada.	Yoga exercise	<ul style="list-style-type: none"> - Reduced distress symptoms. - Reduced perceived stress. - No measureable effect on depression. - Rated as beneficial intervention. 	
MacLaughlin et al (2010), US.	The Mind Body Medicine Skills.	<ul style="list-style-type: none"> - Lower change in Cortisol level - Lower morning Cortisol, DHEA-S and testosterone levels - Lower evening Cortisol level DHEA-S and testosterone levels - No measurable effect on sIgA level. - These facts suggested that intervention seem to be protected from the significant increased levels of Cortisol, DHEA-S and testosterone during stressful period. 	

Table 7. Outcomes of long-duration stress management intervention (required duration of more than 8 weeks).

There were two interventions reported under other category. In general the outcomes of these interventions were related to improvement of psychological health, general wellbeing and awareness about coping strategies (table 8).

Source and Country	Name of intervention	Outcome	Summary of outcome (n)
Soskis (1978), US.	The Meditation & Healing	<ul style="list-style-type: none"> - increased interest to practice meditation as coping method. - increased interest to share meditation practice with patients. 	<ul style="list-style-type: none"> - Increased awareness about coping strategies (1) - Improved psychological health (1) - Reduced loneliness state (1)
Kiecolt-Glaser et al (1986), US.	Support group (hypnotic/ relaxation exercise)	<ul style="list-style-type: none"> - Reduction of anxiety level between groups. - Reduction of loneliness pre and post intervention. - No measureable effect on academic performance. - No measureable effect on personality score. - No measureable effect on immunologic health markers. 	

Table 8. Outcomes of other stress management intervention (duration was not mentioned in the articles).

Study design (frequency)	Intervention Group size [n1]	Control Group size [n2]	Total participant [n1 + n2]/ total sample size [N]	Response rate	Source
Randomized controlled trial (7)	1st study (year 1 medical students 1979/1980) 1st group = 12 2ns group = 7	1st study (year 1 medical students 1979/1980) Lecture group = 13 No Rx group = 13	1st study 38/99	1st study 38.38%	Mitchell et al (1983)*
	2nd study (year 1 medical students 1980/1981) 1st group = 4 2nd group = 4	2nd study (year 1 medical students 1980/1981) Lecture group = 8 No Rx group = 8	2nd study 29/99	2nd study 29.29%	
	Intervention group = 15 year 1 medical students	No Rx group = 9 year 1 medical students	24/40	72.5%	Holtzworth-Munroe et al (1985)**
	Hypnotic/relaxation group = 17 year 1 medical students	Waiting list control group = 17 year 1 medical students	34/34	100%	Kiecolt-Glaser et al (1986)**

Study design (frequency)	Intervention Group size [n1]	Control Group size [n2]	Total participant [n1 + n2]/ total sample size [N]	Response rate	Source
1st study (year 1 medical students 1983)	Intervention group = 50	1st study (year 1 medical students 1983) No Rx group = 46	1st study 96/100	1st study 96%	Nathan et al (1987)**
2nd study (year 1 medical students 1984)	Intervention group = 49	2nd study (year 1 medical students 1984) No Rx group = 54	2nd s tudy 103/103	2nd study 100%	
	Intervention group = 21 year 1 medical students	Waiting list control group = 14 year 1 medical students	35/35	100%	Whitehouse et al (1996)**
	Intervention group = 36 (mixed of premedical, year 1 and 2 medical students)	Waiting list control group = 37 (mixed of premedical, year 1 and 2 medical students)	73/78	93.58%	Shapiro et al (1998)**
	Meditation group = 27 (mixed of medical and allied health students) Relaxation group = 24 (mixed of medical and allied health students)	Waiting list control group = 30 (mixed of medical and allied health students)	81/104	77.88%	¹ Jain et al (2007)**

* Random sampling method

** Non-random sampling method

¹Sample size was calculated

Table 9. Summary of sample size of intervention and control groups for the randomized control trial studies.

For randomized control trial (RCT) studies (table 9), the smallest and biggest number of participants in an intervention were 4 and 50 respectively. The smallest and biggest number of participants in a control group were 4 and 54 respectively. Majority (n=6) of the RCT studies involved year 1 medical students as study subjects. The response rate for non-random sampling RCT studies (n=6) ranged from 72.5% to 100%. While the response rate for random sampling RCT study (n=1) ranged from 29.29% to 38.38%. It seems that response rate for random sampling RCT study substantially poorer than non-random sampling RCT studies. On top of that, only one RCT calculated sample size.

4. Discussion

Without time limit, the literature search yielded 23 relevant articles reported on the effectiveness of stress management interventions on medical students. The earliest study was reported in 1978 (Soskis, 1978) and the most recent study was reported in 2011 (Yusoff, 2011). This section discussed on the effectiveness of those interventions with regards to five aspects which were 1) nature of participation, 2) research methods, 3) structure, facilitators and duration of intervention, 4) measured outcomes and instruments used to measure them, and 5) outcomes of the interventions.

In 2000, there were 15 studies reported stress reduction interventions on medical students (Shapiro et al., 2000) and in this present literature review there were 23 studies reported on the interventions (i.e. 11 years after Shapiro et al (2000) systematic review, only 8 additional studies were reported on stress management interventions for medical students). These facts suggested that despite large number of articles criticized on the negative impacts of stress related to medical training on medical students and call for remedies to buffer the unwanted consequences yet very few have put on effort to study on specific effects of stress management interventions on medical students (Shapiro et al., 2000). Even fewer studies have provided convincing data on the effectiveness of stress management interventions on medical students' health. Therefore, now is the right moment for medical educators to put more effort to expand the body of evidence on effective interventions in buffering the negative consequences of stress related to medical training on medical students (Butterfield, 1988; Shapiro et al., 2000).

4.1 Nature of participation

This systematic review clearly showed that the biggest limitation of the reported studies was related to sampling method of the participants which was non-randomized. As a result, voluntary nature of participation to the interventions was more likely to attract students who were highly motivated to change and thus more sensitive to any intervention done; this may lead to inaccuracy of outcomes measured. Nevertheless, logically having students voluntarily participating in the intervention may be more practical and feasible (Finkelstein et al., 2007). Perhaps, random sampling method in selecting participants of stress management interventions should be considered in future research to minimise bias due to volunteer participation. Therefore more authentic and convincing outcomes could be measured.

4.2 Research methods

This systematic review clearly showed that very few studies used robust study designs in investigating impact of stress reduction interventions on medical students and all of them were conducted in United State (US) as shown in the table 1. Although, Shapiro et al (2000) recommended in previous literature review to incorporate rigorous study design such as randomized control trial, unfortunately this recommendation has not been addressed where 11 non-randomized studies were done whereas only one randomized control trial was done post-recommendation (table 1). A possible reason for researchers preferred to conduct non-randomized experimental studies instead of randomized control trial may be due to issues

related ethical, feasibility and practicality of randomizing participants into intervention and control groups (Finkelstein et al., 2007; Piaw, 2009; Katz, 2010).

4.3 Structure, facilitators and duration of intervention

This systematic review demonstrated that majority of interventions was conducted by psychologist/psychiatrist, offered as an elective course as well as seminar or workshop, consumed a duration of 360 to 540 minutes over 3 to 8 weeks and involved 30 to 50 participants. For RCT studies, majority involved year 1 medical students as study subjects, sample size for intervention groups ranged from 4 to 50 participants and relatively RCT used random sampling method had poorer response rate compared to non-random sampling (table 9). Perhaps stress management interventions should be conducted by general faculty members of medical schools instead of few experts so that the interventions can be implemented effectively to medical students. On top of that, most of the studies had not explained theoretical basis of the intervention was designed. Perhaps, future studies should describe the theoretical basis of stress management intervention was designed so that researchers could compare and come out with more effective intervention based on more robust theory of stress management intervention for medical students. It is worth highlighted that generally the interventions were categorised into brief, short-duration, medium-duration and long-duration stress management interventions.

4.4 Measured outcomes and instruments used to measure them

This review revealed that various aspects of health outcomes were measured ranging from students' perception up to health biomarkers. Despite the variability of measured outcomes, there were three main outcomes related to psychological health as measured by most of the studies which were anxiety, depressive and psychological distress symptoms. These outcomes were mainly measured by established psychological health measurements such as the State-Trait Anxiety Inventory, Brief symptoms Inventory, Symptoms Checklist Revised, Depression Anxiety Stress Scale and Beck Depression Inventory. Other important outcomes that should be considered in future researches such as academic performance, patient-doctor relationship, loneliness state, health biomarkers, quality of life, and suicidal thoughts.

4.5 Outcomes of the interventions

For the past 24 years, regardless of the duration of stress management interventions, this literature review revealed the interventions done on medical students had important positive outcomes on several areas related to health. The outcomes ranged from positive students feedback up to improvement of health biomarkers. The reported positive outcomes were related to 1) positive student feedbacks, 2) improved psychological health, 3) improved loneliness and mood disturbances, 4) improved physiologic and immunologic health markers, 5) improved quality of life, spirituality, and empathy, 6) improved psychological states of mind, 7) increased awareness about stress, its effects and management, and 8) improved perceived ability to cope effectively and positively. Despite of these positive outcomes, none of studies demonstrated effectiveness of the interventions

on clinical competencies, professionalism, doctor-patient relationships, attrition and suicidal thoughts. Perhaps these outcomes should be investigated in future researches.

5. Conclusion

This systematic review found that stress management interventions done on medical students were well-accepted and had important positive outcomes on several areas related to health. Despite these encouraging outcomes several limitations should be considered for future research which are (1) longer duration of follow up measurement on intended outcomes, (2) more robust research method, including proper sample size calculation, random sampling of subjects, randomised allocation of subjects to intervention group and comparable control group, (3) comparing impacts of intervention on different stages of medical training, (4) customized and personalized stress management, (5) investigate the impacts of stress management on professionalism, doctor-patient relationship and patient care in future, and (6) specify the theoretical basis of stress management was developed.

The implications of this review are significant on a few areas that might be worthwhile for further research. Future research must look at impacts of different duration and frequency of stress management interventions on students' health, personal and professional development; therefore optimal duration and frequency of these interventions to produce positive impacts can be determined. It is also worthy to explore which components of these interventions produce therapeutic effects and which are more effective. On top of that, future research must look at which of these interventions work best to which group of students, therefore personalized and customised stress management interventions can be designed accurately and effectively. Last but not least, future research must utilise rigour and robust research methodology to elicit real impacts of stress management interventions. Perhaps, the implications discussed in this review are not only confined to medical students, but it can be also utilised by researchers of other disciplines as a guideline to design, plan and conduct similar researches in their own setting. Utilization of similar health measurements for outcomes comparison in future researches is recommended.

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