

Experience and Learning in the Ecosystemic Model of Culture

A Critical Approach to Education, Culture and the Environmental Crisis

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For the diagnosis and prognosis of the problems of quality of life, a multidisciplinary ecosystemic approach encompasses four dimensions of being-in-the-world, as donors and recipients: intimate, interactive, social and biophysical. Social, cultural and environmental vulnerabilities are understood and dealt with, in different circumstances of space and time, as the conjugated effect of all dimensions of being-in-the-world, as they induce the events (deficits and assets), cope with consequences (desired or undesired) and contribute for change. Instead of fragmented and reduced representations of reality, diagnosis and prognosis of cultural, educational, environmental and health problems considers the connections (assets) and ruptures (deficits) between the different dimensions, providing a planning model to develop and evaluate research, teaching programmes, public policies and field projects. The methodology is participatory, experiential and reflexive; heuristic-hermeneutic processes unveil cultural and epistemic paradigms that orient subject-object relationships; giving people the opportunity to reflect on their own realities, engage in new experiences and find new ways to live better in a better world. The proposal is a creative model for thought and practice, providing many opportunities for discussion, debate and development of holistic projects integrating different scientific domains (social sciences, psychology, education, philosophy, politics, etc.).

Key-words: education, culture, politics, health, environment.

The Salary of God and the Work of Man

In the beginning, God created the heavens and the earth. Relying in the excellence of his work, he expected that sentient beings, like mankind, would, in due time, bring him heavenly dividends, acknowledging the prominence of his creation, preserving its dynamic equilibrium and enhancing it with beauty, love and care.

Since then the universe has been continuously unfolding: galaxies gave birth to stars, stars diligently assembled the elements to build an infinity of planets, which eventually could harbour life; in the Earth, plants garnished it with flowers and replenished it with fruits, animals spread over the land and the sea, birds excelled with their beautiful feathers and songs.

As a conscious and animate partner of God, mankind should honour God's expectations, bestowing a significant contribution to his endeavour. Respect for the diversity of life and scenarios, law-abiding and ethical behaviour, care for others, equity and justice would be God's payment in recognisance for his endeavour. Would God be satisfied with mankind's partnership?

Nowadays, quality of life, natural and man-made environments, physical, social and mental well-being are undermined by all sorts of hazards and injuries; political, economical and social disarray normalise atrocious behaviours and violence, dehumanisation, depersonalisation and reification erode quality of life all over the world.

Although many problems may not be internally soluble within the human community, which is not self-enclosed and has a relationship to the sky, to the gods, to the nature, to strange forces that we cannot control (Wood, 2000), current events on Earth confirm the strong link between individuals, groups, society and the environment.

The future of creation, "new Earth and new Heavens", would depend on the quality of the relationships between men and men and men and nature. "The subject matter of ecology is not individual organisms but interrelationships, the science from its beginning drew heavily upon concepts, models, and metaphors from other fields, within and outside the sciences" (Cittadino, 2002).

The application of ecological systems theory to human development shows that the myth of power and the resulting conflicts (man versus environment, nations versus nations, classes versus classes, man versus God) ignores the fact that in cybernetic systems the parts can not take unilateral control over the whole or any other part (Bateson, 1979).

The world is not classifiable in different kinds of objects, but in different kinds of connections (Capra, 2002; Heisenberg, 1958); it can be thought as a kind of a giant hologram, in which, in some implicit sense, a total order is contained in each region of space and time (Shainberg, in Hiley and Peat, 1994). Inwardness and outwardness are complementary aspects of reality.

The micro, meso and macrosystems are complex "layers" of the environment structure, each having an effect on the human development (Bronfenbrenner, 2004). Selfhood, embodiment and environment are extensions of each other, microcosmic "bodies" are continuous with and permeated by the macrocosmic "environment".

The polymeric structure of space-time pervades the entire universe, thousands of historical events closely interrelate in the genesis of all events (phenomena, processes, actions); the higher is the numbers of levels in the system under research, the more complicated is the polymeric structure of the actual part of the time's metabolic space (Lisin and Platonenko, 2005/2006).

According to a phenomenological approach (Binswanger, 1957), being-in-the-world (*Lebenswelt*), encompasses the "inner world" (*Eingenwelt*), the "interactive world" (*Mitwelt*), the "world of men" (*Menschenwelt*) and the "environment" (*Umwelt*). Existence should be understood as the focal point of these overlapping "worlds".

Three overlapping spheres co-exist: the *ecosphere*, relating to a person's (or groups') physical environment and surroundings, the *sociosphere*, relating to an individual's net interactions with all other people in an environment and the *technosphere*, encompassing all the person-made things in the world (Gardiner, in Goumain, 1989).

A mysterious tissue or matrix underlies and gives rise to both the perceiver and the perceived. The environment presupposes perceptions and vital processes, it pre-exists and co-exists (*Wirklichkeit*), it integrates our experience in the daily life (*Lebenswelt*), it is also a concept, a result of a conscious process (*Realität*), a domain of "scientific knowledge" (Wallner and Peschl, in Cohen, 1999).

It is not the efficient exploitation of knowledge that matters, but the learning process by which it is created. Due to non-linear relationships, small inputs in systems that are far from equilibrium can trigger massive consequences, as posited by evolutionary thermodynamics, in terms of self-organising systems and sustainable development (Prigogine, 1980).

In a time where pressures on such systems steadily increase, "catastrophic bifurcation" can appear without obvious early warning signals, and the resulting change can be difficult to reverse. Understanding how such transitions come about in complex systems such as human societies, ecosystems and the climate system is a major challenge (Scheffer et al., 2001).

Complex thought has an ethical dimension (Morin, 2004). The unfolding cosmos, as an autopoietic process, needs a *general extended view*, a real world's theory connected to the different states of knowledge of the different scientific disciplines, from which *special extended views* could be deduced (Kofler, 2007), in view of the different problems currently posed.

Knowledge cannot be identified with the ontological reality, it serves the organisation of the experiential world and should be actively built up (Allen, 2004). The relationship between sustainable development and economic growth has been over-emphasised; social justice, solidarity and respect for ecological limits have been neglected (Verburg and Wiegel, 1997).

Sustainability cannot be pursued within the prevailing development strategies, which ignore, underestimate and undermine values and environments essential to a healthy human development. Security, sustainability and stability depend on an ethical and spiritual world view, on respectful and enriching values sustained within a specific society (Ryan, 1995).

The future of creation, "new Earth and new Heavens", would depend on the quality of the relationships between men and men and men and nature. Processes and products, principles and actions are each other mirror and should walk together; duties and rights, deeds and beliefs are the faces of the same coin; inside and outside complement each other.

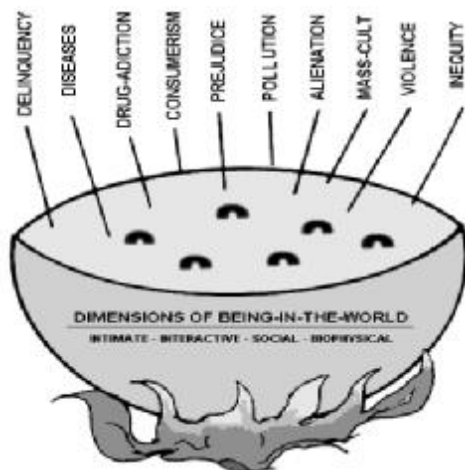


Fig. 1 Problems should be looked for deep inside the boiling pot, not in the bubbles of its surface.
 Fig. 2 Microcosmic “bodies” are continuous with and permeated by the macrocosmic “environment”

New Policies to Live Better in a Better World

Nowadays, natural and built environments are destroyed, human values that took centuries to develop are annihilated by overspread violence and greedy, the essence of the problems is distorted by segmented public policies, academic formats, mass-media headlines, common sense prejudices and overwhelming market-place’s interests.

Ethical questions, the conceptual direction and the moral legitimacy of development strategies should be examined, specially by the leaders of academic sectors, which, in the name of a "high status knowledge", have surrendered to specialisation and fragmentation, in a milieu of ethical indifference, moral objectivity and neutralism (Bowers, 2006).

Sweeping market-oriented reforms, privatisations, deregulations, resulted in relinquishing state's duties to the private sector (security, health, education); public services barely survive, the "philosophical" questions of ethical, moral and civic education are left aside, in the name of information and communication technologies, presented as a panacea.

Notwithstanding the pervasiveness of marketing in society (Ait-ouyahia and Seaman, 2006), we should not take current prospects for granted, projecting into the future the trends of today (*exploratory forecast*), but define new goals and explore new paths to reach them (*normative forecast*) (Jungk., 1974), in view of new forms of being-in-the-world.

Public policies should not be ready-made “patches” put on bad situations to make them “straight”, Instead of “mending” individual or social “defects”, by focusing on needs, deficiencies and problems, they should be asset-based, internally focused and relationship driven, centered on inner resources and capacities' development (Kretzmann and McKnight, 1993).

Instead of picking the “bubbles” of the surface (segmented issues), subverting or ignoring what is inside the “boiling pot” (the real problems) (fig.s 1 and 2), public policies should pay attention to the relevant factors that are generating the evils of our times, encompassing governance, justice, equity, ethics and social responsibility.

The world’s generalised problems cannot be sorted out by segmented projects, which ignores micro, meso and macro relationships. Foreign policy, education, politics, economics, should change their current paradigms and practices, in view of a culture of peace, environmental sustainability, justice and cooperation as organising principles (Peace Alliance Foundation, 2005).

Core beliefs and values, faith and trust, safety and security should be restored ("social capital"). Historic evidence indicates that significant community development takes place only when local community people are committed to investing themselves and their resources in the effort for community involvement and education (Helliwell and Putnam, 2004).

When powerful political and economical groups abuse rational arguments to conceal embedded interests, new technologies usually exacerbate the gap between the possessed and the destitute, who are continuously manipulated by propaganda to acquire all kind of gadgets, as a substitute for the lack of education, culture, justice and citizenship.

In this context, new technological waves will not rescue a devastated environment nor relieve the excluded (Mooney and Hope, 2006). When political, economical and cultural disarray normalises all sorts of unethical procedures and transgressions, inequities, violence and atrocious behaviour are condoned and looked upon by people as part of their daily life.

Globalisation has brought violence, uprootings, displacements, discordances, war, genocide, hunger, inequities, ecological vulnerability and deep social division (American Anthropological Association, 2005). More and more it becomes difficult to distinguish between "legal" and "illegal" strategies and methods, which become very much alike in the assemblage of political and economical interests.

Excepting contractual bonds, neoliberalism atomises society and breaks potential networks of solidarity (Rapley, 2003). Private authority erodes state's power and the utopia of global governance, leaving it in the hands of multinational corporations, financial institutions and organised crime (Hall and Biersteker, 2003).

A profound change in the present ways of being-in-the-world is imperative. In a cultural, social and environmental degenerated condition, distinction between self-interest and mankind survival is crucial, social vulnerabilities can not be disassociated from environmental, economical, political, cultural and ethical considerations: growth, power, wealth, work and freedom must acquire new meanings (O' Sullivan, 1987).

A culture grounded on market economics tends to produce human beings who have trouble being moral and developing coherent selves (Riker, 2006).. Most of the megacities of the world are deeply troubled places: economies sputter, social ties weaken, political power fades. Crime and violence, joblessness, homelessness, gangs and drugs proliferate (Kretzmann and McKnight, 1993).

Many cities of the so-called emergent world are recognised as problem-ridden, economically unequal and intrinsically violent¹. While the elite enjoy life in fortified enclaves, most of the city dwellers live in makeshift slum housing, often without access to the basic social services (health, education) and dependent on criminality for survival.

The link between environmental stress and violence has been verified in different studies (Homer-Dixon, 2006), with severe consequences. It is not a surprise that social unrest has been increasing exponentially, specially among those that immigrated to the large cities in search of a better life and are hampered by multiple obstacles.

The social vulnerabilities, that affect the poorest people in many cities of the world, has a cascade effect on the entire population. Chronic deficiencies in education, security, sanitation, dwelling, transport sway over all the inhabitants²; due to the outspread violence, most people become, by and large, uninvolved in civic life (Baiocchi, 2005).

“Social inclusion” policies only accommodate people to the prevailing order, they do not empower them (Labonte, 2004); once “included”, a new wave of "egocentric producers and consumers" (Chermayeff and Tzonis, 1971) will reproduce the very system responsible for their former exclusion, abusing cultural values and nature in the name of “progress” (Tsipko, 1985).

¹ Increasing urban sprawl and related environmental degradation; car-dependent communities, longer commutes to work; traffic gridlock, poor air quality and loss of green space, a suburban mono-culture that lacks diversity; increased air pollution and sedentary lifestyles ask for a revolution that demands a long-term commitment (Caplan, 2006).

² Indicators like age, income, employment, household, health status, gender, ethnic origin, perception of risks and education are the counterpart of the degree of government preparedness and capabilities to face the impact of social and natural hazards (Dwyer et al., 2004.).

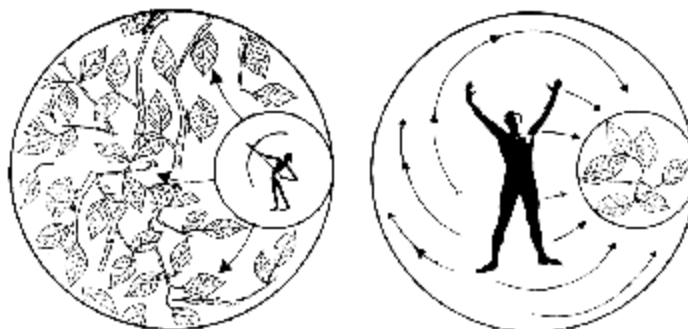


Fig. 3 Man as a supportive species (primitive societies) versus man as a dominant species (civilised societies).

Progressive social change groups must incorporate a deeper spiritual understanding into their work (Lerner, 2007). Contrary to the *adversary paradigm*, the *mutuality paradigm* is based on the assumption that the other is a friend, a colleague and an ally (Fellman, 1998). Protecting relationships is often overlooked, when learning is abstract and decontextualised (Konai, 2005).

Besides economical and political equity, human rights include cultural and spiritual values, the preservation of rich natural and man-made environments, the engendering of beauty, creativity, conviviality, privacy, tranquillity and peace. Social and economical advancement should not be a private question, but a collective one.

Peace building, acceptance of ethical norms requires a multitude of ethically interpreted and ordered social experiences, a capacity for having morally relevant interests as the bases of rights-bearing, a broad, universally rationalised cultural knowledge, an empathy with people, including those regarded as alien, or even hostile (Znaniecki, 1935).

Facade democracies usually try to repair "bad" situations to make them "straight", ignoring that "duties" and "rights" can not be prescribed in adverse political, economical, social and cultural conditions: it is a non sense to prescribe that everybody has a "right to play a piano" when the piano is not available, when no one knows how.

Freedom *for* is not the same as freedom *from* (Fromm, 1941): authentic freedom or freedom *for* presupposes existential control, a capacity to make adequate choices; the latter merely indicates the absence of exterior constraints, the former requires an ethical ground, preparedness (there is no "freedom" for playing a piano when one lacks the ability).

Freedom and responsibility are sides of the same coin: being accountable for one another (even for other's faults, if one fails to intervene), doing or abstaining from something in view of others, are essential to authentic freedom (Levinas, 1974). In a society with any organising principle at all, individual rights suppose the assumption of collective responsibilities.

Life should acquire a new kind of normality, not by repairing humans, but by enhancing them (Miah, 2003). In a cultural, social and environmental degenerated condition, "repairing" means the tentative to restate a former "normal" level of functioning, "enhancing" creates new physical, social and mental environments, which are essential to live better in a better world.

To understand and resolve our present crisis, the concept of man as a "dominant" species should be reversed by man as a supportive one (fig.3); the identification of "progress" with individual or corporate self-interest and the way human beings deal with each other must be changed (Bookchin, 1993), in view of a new political vision to govern the world.

A process of change is not a matter of throwing out "old things", nor acquiring "new things", but the development of a new way for being-in-the-world, which asks for both design and action; it is useless to change the furniture in a room without a new concept for living in it, before erecting a house, an architect looks for the well-being of the dwellers.

Table I
Dimensions' equilibrium in the ecosystemic model of culture

	Donors			
Recipients	<i>INTIMATE</i>	<i>INTERACTIVE</i>	<i>SOCIAL</i>	<i>BIOPHYSICAL</i>
<i>INTIMATE</i>	Creativeness	Support	Services:	Vitality
<i>INTERACTIVE</i>	Cooperation	Cohesiveness	Diversity:	Niches
<i>SOCIAL</i>	Citizenship	Partnerships	Organisation	Spaces
<i>BIOPHYSICAL</i>	Care:	Preservation	Sustainment	Equilibrium

Table II
Dimensions' disruptions in the non-ecosystemic model of culture

	Inflictors			
Victims	<i>INTIMATE</i>	<i>INTERACTIVE</i>	<i>SOCIAL</i>	<i>BIOPHYSICAL</i>
<i>INTIMATE</i>	Solypsism	Abdication	Domination	Agression
<i>INTERACTIVE</i>	Heteronomy	Fanaticism	Cooptation	Dispersion
<i>SOCIAL</i>	Subjection	Corporativism	Totalitarian	Extinction
<i>BIOPHYSICAL</i>	Predatory	Exploitation	Spoilation	Savageness

Education, Culture, Environment and Development

What are the prospects of education as a whole, and environmental and sustainability education in particular, regarding the severe threats faced by today's world? Identifying complex configurations or conditions that predict particular outcomes, in terms of multiway, nonlinear interactions among variables, asks for an integrative multidisciplinary approach.

The United Nations decade for education for sustainable development emphasise critical thinking and problem solving, interdisciplinary and holistic multi-method, values-driven approaches, encompassing environmental principles, social awareness, ethical dimensions, economic prudence, confidence and participatory decision-making (Lindberg (2005).

Beyond environmental education, development education³ proposes a "new story" for mankind, enhancing local and global citizenship, human rights and justice, supporting people to understand and transform the social, cultural, political and economic structures affecting life at personal, community, national and international levels (Irish Aid, 2007).

Cosmopolitan movements and stances advocate a program for a global social democracy, emphasizing rights and a multi-level citizenship, a "new global covenant" that would reconcile globalization with the demands of social integration and justice (Held (2004), protecting the environment, rejecting violence, reducing hunger, and opposing war.

Ecological crisis reflects a prior disordering of thought, perceptions and values (Orr, 1994), and is a sign of the severe cultural crisis of our times, which break through the core of societal institutions -- education, justice, governance -- are already impaired by the dominance of international corporate interests and the collusion of political elites.

Beyond profit-searching motives of business corporations and other vested interests, transboundary issues like human rights, pollution, drugs, and criminality impose a significant reconfiguration of state control and political authority, involving a new world, in which power must be shared on a transnational basis and on ethical grounds.

Deforestation, desertification, global warming, biodiversity losses and other extreme events are linked to the action of powerful economical and political interests, which try to legitimise business expansion in terms of energy or food demand, spreading even more the poverty, famine and violence in the world by their destructive action.

Compliance to and enforcement of environmental legislation depends on the cultural, educational and political level of the citizens, of governance styles, more or less lenient towards the action of influential people and organizations. In this sense, the role of public attorneys and judges are hampered by the very system in which they have their insertion.

³ More broadly defined than "environmental education", the term "education for sustainability" (or "education for sustainable development") emerged primarily out of the Earth Summit and includes international development, economic development, cultural diversity, social and environmental equity, and human health and well-being.

Concentration on mere growth obscures sustainability, human development, order and stability in civil society; the spreading of myths that if one group gets richer, others will share in the wealth, uses and discard people at will as economic building blocks (Bown, 2007), impairing health, environment, culture, education and knowledge.

Growth, power, wealth, work and freedom must acquire new meanings (O' Sullivan, 1987). Concentration on the accumulation of wealth to the exclusion of other components of the development process (safety, health, justice, equity, ethics, beauty) has led to overwhelming natural devastation and to the deeply troubled megacities of today.

Environmental regulations to protect watersheds, forests and wildlife has been proved impotent to face powerful lobbying, which supports policies resulting in chaotic and conspicuous consumption and predatory life styles, undermining adequate planning and distribution that would forestall poverty, famine and violence at national and international levels around the world.

Beyond the objectivistic description of the facts or disseminating information to the public, the design, development, and utilization of concepts, tools and practices to enhance the quality of life must take into account the collective forms of being-in-the-world, in order to make the necessary changes in the current model of culture.

According evolutionary theories of change, practices are selected by the social environment rather than by individuals; however, it is important to consider the role played by human purpose, intelligence, planning, learning, arguing, persuading, calculation, discussion, and argument, "as a vital part of cultural evolution" (Nelson, 2005).

Development education must be associated with an ecosystemic model of culture⁴, leading to public action and citizenship participation to change current development policies and structures that abuse resources and generate refuses, destroying natural and built habitats. living-spaces, biodiversity and overall quality of life.

Education for citizenship cannot be reduced to formal or ritualistic actions, such as voting or paying taxes, nor can it encourage an uncritical ideological allegiance to the "free-market", transforming schooling in training centers for a compliant work force, which takes for granted the perverse life style of egocentric producers and consumers and contribute for it.

Education as a whole, and environmental and sustainability education in particular, "are limited in their ability to make a positive difference to assure a more sustainable future" (Sterling, 2003). "Whilst environmental education help to normalise values, cues for appropriate behaviour are taken from the media, peer group and society as a whole" (Bedford, 2002).

Environmental education cannot prosper in a context of social fragmentation and weakening social bonds: creation of choices, generation of capacities, development of motivations depend on cultural, social, political and economical aspects; the quality of institutions and incentive structures are more critical than the quality of individual motives and morals (Krol, 2005).

Since universities are responsible for preparing people to assume key positions in society, both as professionals and citizens, the discussion of environmental problems, processes, and possibilities should transcend traditional disciplines, as interdisciplinary research and teaching programmes, in view of global perspectives and international cooperation.

Formal schooling does not preclude the work with community organizations and projects with the general population. Technological advancements should respect the precautionary principle in view of social, ethical and environmental impacts. Stock market concerns should not dominate basic research, risks must be prevented by overall policy assessments.

We need investments beyond product design and promotion, we need "media attention to frame issues as novel and important, dramatization in symbolic and visual terms, popularizers to bridge environmentalism and science, economic incentives for taking positive action, and institutional sponsors to ensure both legitimacy and continuity in the process" (Hannigan, 1995).

⁴ As explained In the subsequent parts of this paper, an *ecosystemic model of culture* takes into account the configurations formed by four dimensions of being-in-the-world (*intimate, interactive, social and biophysical*), that should be dealt with simultaneously, as they induce the events (deficits and assets), cope with consequences (desired or undesired) and contribute for change.

Table III
Intertwining the four dimensions of the world in the diagnosis and treatment of the problems

Stages of the Plan	INTIMATE	INTERACTIVE	SOCIAL	BIOPHYSICAL
Diagnosing Events	Subject's Cognitive-Affective Processes Existential Control	Dynamics and Cohesion of Groups and Communities'	Public Policies Social Structure Culture, Values	Natural and Man-Made Environments Beings and Things
Eliciting New Events	Subjects' Cultural And Educational Development	Social Networks Groups and Community Building	Integrative Policies Law Enactment Citizenship	Enhancement of Natural and Man-Made Environments
Evaluating Changes	Resilience Awareness Subjects' Well-Being	Proactive Groups and Communities Participation	Well-Fare Policies Citizenship Participation Human Development	Equilibrium of Natural and Man-Made Environments

The Ecosystemic Approach to Quality of Life

Cross-cutting programmes on sustainable development imply a worldwide change of focus and procedures in different areas related to the production, distribution, consumption and discard, in view of the three Rs: *reduce* consumption, *reuse* products, and *recycle* materials. This is not only a matter of education, but of governance and societal organisation.

The objective is not to solve taken for granted problems (the “bubbles” in the surface), but to unveil and work with the dynamic and complex configurations in the “boiling pot”, encompassing the mutual role of individuals, groups, society and environment in order to understand how problems arise and how to deal with them, at micro, meso and macro level.

Instead of “repairing” “bad” situations to make them “straight”, problems of difficult settlement or solution should be assessed in different contexts and settings, as expressions of the interplay of the dynamic configurations encompassing the different dimensions of being-in-the-world: intimate, interactive, social and biophysical (Pilon, 2003).

The four dimensions must be dealt with simultaneously, as mutually entangled donors and recipients, considering their connections and ruptures and how actual and potential deficits and defaults affect each other, as they *induce the events* (deficits and assets), *cope with effects* (desired or undesired) and *contribute for change* (expected outcomes):

- *intimate dimension*: core beliefs and values, coping abilities (cognitive, affective and cultural), self-esteem, resilience, civic profile, capabilities, expectations, desires, existential control;
- *interactive dimension*: networks, communities, groups' cohesion and mutual support (family, neighbourhood, workplace, religious and political affiliations), friendship ties;
- *social dimension*: public policies, educational, cultural, public health and socio-economic status, local, national and global citizenship, partnerships and resources; social networks, civic engagement;
- *biophysical dimension*: biological endowment, matter and energy, fauna, flora, land, water, air, natural and man-made environments, scenarios, landscapes, buildings, artefacts.

In an ecosystemic model of culture, there is a dynamic equilibrium, interconnection, interaction and reciprocity between the different dimensions of the world [table I]. In a non-ecosystemic model, they drift apart or seek a hegemony (individuals, groups, societies and environment are in conflict); disruption, isolation, unbalances, catastrophes, disease, famine and violence follow soon [table II].

Analysis implies the assessment of the actual and potential role of each dimension in view of the configurations formed by the imbrication of the different dimensions in the space-time continuum (table III); in this sense, overall policies and projects, in different domains (education, health, environment, etc.) should:

- define the problems within the “boiling pot” instead of reducing them to the bubbles of the surface (fragmented, taken for granted problems);
- deal with the events as products of a dynamic field, intertwining the four dimensions of being-in-the-world: intimate, interactive, social and biophysical (see table IV for health-related problems);
- verify the deficits and assets of the dimensions as donors and recipients, in view of their relationships, in a mutually entangled web (configurations);

Table IV
Effects of the dimensions of the world in selected health-related problems

HEALTH RELATED PROBLEMS	INTIMATE <i>Subjective Well-Being</i>	INTERACTIVE <i>Group Development</i>	SOCIAL <i>Collective Well-Fare</i>	BIOPHYSICAL <i>Environment and Beings</i>
<i>Depression (Exogenous)</i>	Quality of own project of life	Group support Social binds, Inclusion	Social and cultural opportunities	Environment, Surroundings
<i>Sexually Transmitted Diseases</i>	Existential control, Self-esteem	Peers' values Fidelity, Defiance	Social awareness, Public policies	Physical protection (preservative)
<i>Adolescent Pregnancy</i>	Emotional maturity Self-esteem	Family cohesion Group values	Revenue, Schooling Health Promotion	Quality of life spaces Settlements
<i>Violence Drug- Addiction</i>	Emotional balance Resiliency	Sub-cultures Group values	Cultural models Inclusion	Quality of dwellings Settlements

- reinforce the singularity (identity, proper characteristics) of and solidarity (reciprocity, mutual support) between all dimensions, strengthening connections and sealing ruptures.
- endorse the development of an ecosystemic model of culture, in view of the balance between all the dimensions of the world (in opposition to the current non-ecosystemic trends).

Working within the Socio-Cultural Learning Niches

Experiential, collaborative, innovative and socially beneficial projects in the socio-cultural learning niches should develop a network of hope, dignity and self-reliance: individuals who think critically, communicate effectively, value diversity, act ethically and show an empathy with people, including those regarded as alien, or even hostile.

Different fronts and actors should be involved, encompassing research and teaching programmes, development of public policies, mass-media communication, governmental and non-governmental organisations, lay and religious leaderships, community building advocacy. How the experience is defined and dealt with is a crucial aspect in the process of change.

Working with phenomena (how reality appears in a specific space-time horizon of understanding, feeling and action), requires an adequate learning environment, which is essential to moral and democratic education (Lind, 2003). The methodology in the socio-cultural learning niches should be participatory, experiential and reflexive, giving the opportunity to engage in new experiences.

Environmental and cultural degradation, climate warming, pollution and looming populations point to questions of power, status and control (Wilson, 2003). A shared way of apprehending the world, the capacity to respond adequately to the experiences, encounters, engagements and interactions, depend on the alternation of challenge and support⁵.

To develop awareness and capabilities beyond the traditional schemes of thought, feeling and action, subjective and objective realities should be entangled, encompassing the alien that we strive to understand and the familiar that we take for granted (Gadamer, 1977); this creates an "excess of meaning", in view of new paradigms of knowledge and action.

Heuristic-hermeneutic experiences unveil cultural and epistemic backgrounds and subject-object relationships in a specific space-time horizon of understanding, feeling and action (table V). Findings and contentions of the different discourses provide the basis for analysis of consensus or discrepancies, agreements or disagreements, in view of a new ground for assumptions regarding the experience.

Innovative projects to develop the ecosystemic conditions to live better in a better world (fig. 4), depend on collaborative experiential learning and communicating processes within the socio-cultural learning niches, of a network of hope, dignity and self-reliance, consisting of individuals who think critically, communicate effectively, value diversity and act ethically.

⁵ "Strategic communication" implies working with people as the essential component of the change; supporting dialogue and debate instead of designing, testing and delivering messages; sensitively placing that information into the dialogue and debate instead of didactic conveying of information from technical experts; focus on social norms, policies, culture and a supportive environment instead on individual behaviours; negotiating the best way forward in a partnership process instead of persuading people to do something; people most affected by the issues of concern playing a central role instead of technical experts in 'outside' agencies dominating and guiding the process (Rockefeller Foundation, 1974).

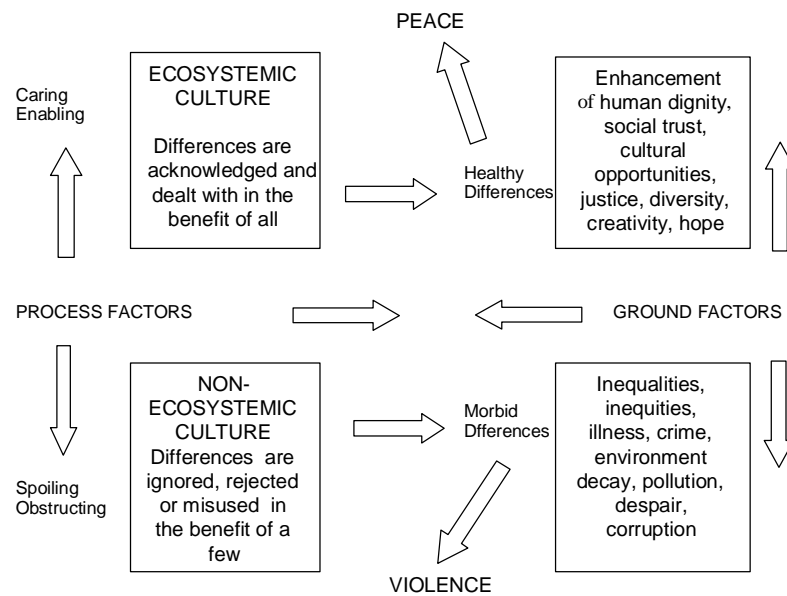


Fig. 4 Violence and peace in the ecosystemic and non-ecosystemic models of culture.

The objective is not to solve taken for granted problems (the “bubbles” of the surface), but to unveil and work with the dynamic and complex configurations in the “boiling pot”, considering individuals, groups, society and environments as active components of the current problems. The heuristic-hermeneutic work in the socio-cultural learning niches is subsequently described:

- *Unveiling subject-object relationships and contents (intimate dimension):* experiences are unveiled by asking the participants to write down in a piece of paper (not identified) whatever comes to their minds in view of circumstantial images or objects previously selected to catch their eyes (like bottle caps linked by a string, passed along).
- *Sharing perceptions in the group (interactive dimension):* The written reports are subsequently redistributed to the participants (out of sort), who share form⁶ and content by reading them aloud in the group; the experience goes beyond individual initial perceptions and is enriched by crossing them in the group.
- *Acting on the cultural and natural milieu (social and biophysical dimensions):* Old and new forms of being-in-the-world are compared, alternative configurations are developed by new experiences in the group, cultural, social, political, economical and environmental issues are analysed in view of different systems of culture (ecosystemic or non-ecosystemic).
- *Developing a new project of life:* As a result of a participatory, experiential and reflexive process, the participants have the opportunity to reflect on their own realities and elaborate new forms to transform them, developing new capabilities to analyse and act upon present and future configurations (fig. 4), formed by the interplay of the different dimensions of being-in-the-world.

The tables at the end of the text are presented to compare how the four dimensions of the world are affected by the ecosystemic and the non-ecosystemic models of culture (tables VI and VII), and to show the effects of the development of the ecosystemic approach in different field projects and research and teaching programmes (table VIII).

⁶ Subject-object relationships can be analyzed in terms of different categories:

- *Appropriation:* Construction of new forms of being-in-the-world, alteration of cognitive, affective and conative paradigms.
- *Common-sense:* Conformity to established, commonplace, stereotyped ways of seeing things, without further questioning.
- *Academic:* Reduction to logical categories and frozen schemes of thought to achieve closure, classifying and describing.
- *Dependency:* Trust on exterior authority to describe and qualify own experience, alienation, bewilderment, confusion.
- *Resistance:* Resistance to being involved, failure to see any meaning in the experience.
- *Dogmatism:* Adherence to fixed paradigms and strict forms of being-in-the-world.

Findings, Conclusions, and Policy Lessons

- Assessment, planning, development and evaluation of public policies, teaching and research projects and community programmes should encompass the four dimensions of being-in-the-world.
- The singularity and reciprocity of the four dimensions of being-in-the-world should be developed in view of their dynamic configurations, enhancing the connections and sealing the ruptures between them.
- Ethics, education, culture, human rights, public policies, physical, social and mental well-being, citizenship, natural and man-made environments and quality of life are strongly affected by the different models of culture (ecosystemic or non-ecosystemic).
- Cultural and environmental commons enclosure, fragmented public policies and reduced conceptual models can be surmounted by an integrated multidisciplinary ecosystemic approach.
- The circumstances that affect individuals, groups, society, natural and man-made environments depend on complex configurations and must be dealt with simultaneously in view of their singularities and balance.
- As by-products of the prevailing models of culture, problems related to ethics, education, culture, natural and man-made environments, physical, social and mental well-being cannot be treated as objects of separate projects, in view of the criteria of acceptance, consistency, effectiveness, evidence and endurance.
- New paradigms of growth, power, wealth, work and freedom should be developed to face the current economic, social, political, cultural, educational and environmental crisis.

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Table V

Statements offered by the participants after exposure to selected objects

Group A

- 1) Half shell; organic/inorganic; nature/human made; solid/flexible.
- 2) Found objects; shell/stones; artefacts; a collection of diverse objects not belonging to any category.
- 3) Objects of nature are more beautiful and interesting in form than are manufactured articles - but the metal caps may suggest that nature provides in many ways - even when unaesthetic.
- 4) Sharp and smooth texture; manipulate.
- 5) Contents: world, rocks from ocean, trash caps, city from modern society, black stones, forest plant; the contents represent global communities: rural, urban, forest, islands.
- 6) Three black seeds, three elastically connected bottle caps, three white river stones and a heart shaped, dried, open seed pot lay in a white rectangular open top plastic container; remains of living plants, time worn rocks and man-made metal objects represent earth materials.
- 7) Different shapes, sharp objects, smooth, multi-national corporations, dry.
- 8) Natural food and junk food; moderation - nature's way and mass consumption; voluntary simplicity, consumerism. sustainability, extinction/destruction.
- 9) I wonder what type of music these items make; was/is the heart-shaped thing good to eat; what are the little "black beans", how were the holes drilled in the pop tops? what kind of soda are the 2 unfamiliar?

Group B

- 1) Box having within: 3 bottle caps tied up by an elastic string (it may suggest interaction, integration, inter-personal communication, horizontality); a seashell, 3 pink stones (it may suggest compartment, non integration between parts); a ribbon of paper with the inscription: how many parts have a grain? (it may suggest the type of information discussed interaction).
- 2) This box (and maybe others) remembers me of my childhood and a beloved aunt, who kept photos and others belongings in it. I feel the smell of sea in the stones and in the alga. I don't know how many parts there in a seed., but nevertheless it would contain the production of life. The link between the objects means the link with other people and the basis of social relations. "Keeping" in the box means to keep people, to keep carefulness, preserving relations that became intense.
- 3) The box deceived me, I expected much for so little. I thought it cold, it is not; heavy, but no. I don't like it, it is smooth, opening it I thought of a jewel-case; new sensations: white little stones, similar to those in the river where I work; united bottle caps, but for children..
- 4) Curiosity, boredom, impatience, beach, sea, chilled water, patience, questions and answers, sand, anxiety, to solve, "Maria Chiquinha", children songs, China, Japan, grains, quantity, immensity, plenitude, rest, tiredness.
- 5) Feeling of anguish in view of the time; inside each of us there are simple and complex things; their development will help us to grow as people.

Table VI

Dimensions of being-in-the-world in the ecosystemic model of culture

<i>Benefits from the Intimate Area</i>	
<i>To Intimate Area</i>	Creativeness: subjects receive from their inner selves the necessary conditions for creation, both in the cognitive and affective domains.
<i>To Interactive Area</i>	Cooperation: groups and networks receive from their members enabling conditions to perform collective tasks (participants help each other, offer advice, listen to others, feel others needs)
<i>To Social Area</i>	Citizenship: societies benefit from active and interested individuals, who perform their social roles with a public regard and responsibility.
<i>To Biophysical Area</i>	Care: environment receive the attention of sensitive individuals, ecosystems are respected by concerned people.
<i>Benefits from the Interactive Area</i>	
<i>To Intimate Area</i>	Support: individuals receive support from groups and networks in order to develop their inner selves (self-esteem, identity, cognitive and affective clues to develop as mature human beings).
<i>To Interactive Area:</i>	Cohesiveness: groups and networks develop within themselves the very ground for mutual support and respect that qualifies human settlements as democratic.
<i>To Social Area</i>	Partnerships: societies benefit of networks and organised groups that sustain the social tissue, including families, peers (primary groups) and every other organised association (secondary groups).
<i>To Biophysical Area</i>	Preservation: environment benefits from the care of groups and networks, who actively preserve ecosystems (directly as specialised groups or indirectly as concerned organisations).
<i>Benefits from the Social Area</i>	
<i>To Intimate Area</i>	Services: individuals are promoted as citizens by societies which care for education, health, employment, leisure, transport, shelter, security, etc (citizenship results from enhanced human beings).
<i>To Interactive Area</i>	Diversity: groups and networks benefit from democratic societies who permit diversity of association on cultural, political and economical grounds
<i>To Social Area</i>	Organisation: Social development and proper organisation entitle societies to provide the necessary services to promote citizens and quality of life at all levels.
<i>To Biophysical Area</i>	Sustainment: environments are sustained by societies concerned with policies and services aimed at the equilibrium of ecosystems, securing biodiversity
<i>Benefits from the Biophysical Area</i>	
<i>To all Areas</i>	Vitality: niches sustainment, variety; biodiversity; adequate natural and man-made environments provide to individuals, groups and societies the necessary conditions to develop physical, social and mental health, enhancing the quality of life

Table VII

Dimensions of being-in-the-world in the non-ecosystemic model of culture

<i>Harms from the Intimate Area</i>	
<i>To Intimate Area</i>	Solipsism: self-existence is the only certainty; subject disregard others; absolute egoism hinders own development due to the lack of exchange with others
<i>To Interactive Area</i>	Heteronomy: groups lose their identity, are manipulated and attach their affairs and interests to another's law or rule.
<i>To Social Area</i>	Subjection: societies become rigid, totalitarian, obeisance to arbitrary rules is enforced by discretionary power of whimsical individuals.
<i>To Biophysical Area</i>	Predatoriness: environments are used arbitrarily, as a "primitive" source for unlimited wealth or pleasure of a few.
<i>Harms from the Interactive Area</i>	
<i>To Intimate Area</i>	Abdication: individuals abdicate of their own identities as human beings, in prejudice of original ideas, feelings and action; self is reduced and impoverished
<i>To Interactive Area</i>	Fanaticism: wild and excessive enthusiasm for ideas accepted without discussion, hinders feedback; groups cannot be creative, restricted forms of thinking degenerate into fanaticism.
<i>To Social Area</i>	Corporativism: societies are controlled by vested interests; groups lose their public dimension, ignoring society's overall interests and looking only for own immediate interests and advantages
<i>To Biophysical Area</i>	Exploitation: environments are considered as a stock of resources to be used whenever there is an advantage to the group, with no concern for others' needs and preservation of the biophysical area.
<i>Harms from the Social Area</i>	
<i>To Intimate Area</i>	Domination: individual feelings and thoughts cannot be expressed; overall "social rule" prevails and blind obeisance is commanded for subjects; there is no possibility of dissent.
<i>To Interactive Area</i>	Cooptation: groups degenerate and are used as instruments for dominant interests; family, peers, associations, networks are coopted by vested interests to promote acts or ideas; there is no informed consent, but a strong pressure, more or less overt or subtle.
<i>To Social Area</i>	Totalitarianism: societies dwindle with the suppression of interlocutors able to present new ideas and to discuss enforced policies, issues are decided in the benefit of the dominant rulers.
<i>To Biophysical Area</i>	Spoilation: environments are abused to the point of no regeneration; deserts, drought, pollution result from brutish policies and practices in connection with production and consuming processes.
<i>Harms from the Biophysical Area</i>	
<i>To All Areas</i>	Aggression, dispersion, extinction, savageness: In the absence of the anthropic principle (inclusion of mankind as part of the natural world) environments grow increasing hostile to humans, catastrophes could destroy entire populations.

Table VIII
Building the quality of life in the ecosystemic model of culture

<i>Dimensions as Recipients</i>				
<i>Dimensions as Donors</i>	Intimate <i>Subjective Well-Being</i>	Interactive <i>Group Support and Integration</i>	Social <i>Political and Civic Life</i>	Biophysical <i>Healthy Environments</i>
Intimate (personal roles) <i>What individuals can do for the dimensions of the world</i>	<i>Subjects care for own development and well-being</i> Cognitive, affective and cultural predicaments, coping abilities, core beliefs and existential control	<i>Subjects care for the development of significant others</i> Bonding, bridging, showing affection, solidarity, support in own group, family, peers and other social groups	<i>Subjects care for the development of society's well-fare</i> Civic engagement, assumption of local, national and global responsibilities in public affairs, citizenship	<i>Subjects care for natural and man-made environments</i> Caring for different environments, fauna, flora and own body; caring for landscapes, architecture, masterpieces
Interactive (groups' roles) <i>What groups can do for the dimensions of the world</i>	<i>Groups care for the development of individuals</i> Accepting, caring for and supporting peoples' inclusion and development in different groups	<i>Groups care for development of own and other groups</i> Promoting mutual understanding, participation, reciprocity and cohesion.	<i>Groups care for the development of overall society</i> Organising societal action, partnerships, alliances, community building; advocacy, citizenship	<i>Groups care for environments and bodies</i> Sustaining organisations and civic action for healthy and aesthetic environments and public services
Social (public roles) <i>What society can do for the dimensions of the world</i>	<i>Society cares for individuals</i> Securing the rights to health, work, education, culture, security, justice, shelter, leisure, nutrition, sports, locomotion	<i>Society cares for groups</i> Establishing public policies and facilities for the development of associative tasks and solidarity within the social tissue	<i>Society cares for society</i> Developing social, political, economical and cultural institutions; facilities, equity, accessibility and accountability	<i>Society cares for environment and physical bodies</i> Sustaining public policies for good governance, health, sanitation, natural and man-made environments
Biophysical (environment roles) <i>What natural and man-made milieu can do for the dimensions of the world</i>	<i>Environment benefits subjects</i> Provision of resources and spaces for life (air, land, water, food, natural and man-made landscapes and artefacts, architecture	<i>Environment benefits groups</i> Provision of resources and spaces for the organisation and settlement of groups and group activities.	<i>Environment benefits society</i> Provision of resources and spaces for physical, social, cultural, political and economic life	<i>Environment benefits environment</i> Balance of matter and energy, biodiversity and equilibrium: land, air, water, fauna, flora, territories and landscapes

Experience and Learning in the Ecosystemic Model of Culture A Critical Approach to Education, Culture and the Environmental Crisis. Save to Library. Download. by Andr  Francisco F Pilon.   5. Quality of life, Ecosystem Approach   Modelling food web interactions, variation in plankton production, and fisheries in the western English Channel ecosystem. Save to Library. Download. by Jim Ellis.   12. Zoology, Climate Change Key-words: education; culture; public policies; environment; ecosystems. Can we imagine a world in which wise and impartial international regulators would have the authority to implement the right set of norms and policies to safeguard mankind s cultural inheritance, natural and built environments, esthetic and life saving values for future generations?   This means that the environment should be examined in view of a critical assessment of environmental information and issues from both a biological, chemical, physical as well as sociological and economic perspective, including all the aspects that affect the human development: criminality, ethics, the economy, culture, environmental law, environmental policy, environmental management tools. Ecological culture is one of the types of culture; the most urgent problem facing all of mankind today is to improve social-ecological relations, i.e. relations associated with the use of the environment and its particular elements to satisfy the material and spiritual needs of society. The development of these relations takes place under the decisive influence of environmental policy at the global and national levels, the ultimate goal of this policy is to harmonize society and nature. Its solution also depends on the ecological culture of the population. It is a system of ideas, knowledge, s...