

DEVELOPING AN ECO-SYSTEMIC APPROACH TO LIVE BETTER IN A BETTER WORLD: A GLOBAL VOICE FOR HUMANITY SURVIVAL IN THE 21ST CENTURY

André Francisco Pilon

University of São Paulo, Brazil

Разработка экосистемного подхода для лучшей жизни в лучшем мире: глобальный призыв для выживания человечества в 21 веке

А. Ф. Пилон

Университет Сан-Паулу, Бразилия

Contemporary problems are fragmented by public policies, academic formats, mass-media headlines and market-place interests; unsustainable paradigms of growth, power, wealth, work and freedom are embedded into the cultural, social, political and economic institutions. An ecosystemic approach is posited along the four dimensions of being in the world (intimate, interactive, social and biophysical) to define and deal with the problems of difficult settlement or solution in our times, encompassing culture, education, politics, economics, ethics, environment and the quality of life.

Современные проблемы фрагментированы государственной политикой, академическими форматами, заголовками СМИ и интересов рынков; неустойчивые парадигмы роста, власти, богатства, работы и свободы встроены в структуры культурных, социальных, политических и экономических институтов. Экосистемный подход предлагается как основной в четырех измерениях человеческого бытия в мире (личностных, интерактивных, социальных и биофизических) для определения и решения трудно регулируемых современных проблем, охватывающих сферы культуры, образования, политики, экономики, этики, окружающей среды и качества жизни.

How to address the problems at their root causes, considering the fragmentation of current institutions, the shaky consensus of consultative international meetings, in view of global climate change, biological diversity protection, agri-business deforestation, massive insecticide use, expansion of cattle raising land, dumping of hazardous wastes, lack of effective organic production, wasteful global consumption (nature as a commodity), building and energy squander in today's big cities?

Public policies cannot be subordinated to the interests of business corporations, cities cannot remain as privileged centers for profit and capital accumulation, transforming citizens in mere users and consumers, public policies cannot be surrender to the interests of business corporations, but should preserve and develop ethical and esthetical values, public spaces, architecture, landscapes, the arts, the letters, heritage, history, contemplating all dimensions of being in the world [7].

Could global governance and societal organization be effective against forces that are too powerful to succumb to a direct attack by «civil society» or global citizens movements? The Law may prescribe rights and entitlements, but there is a tacit consensus among Government's Officials worldwide on how to handle things in view of the dominant political and economic interests, always influential before the established judicial courts, particularly in the Global South.

Deeply entrenched networks act together to prevent accountability, funneling finance and influence for the benefit of corrupt groups; a significant part of political people participate in governmental processes to secure and retain access to personal enrichment at the expense of the public good; preparing people to assume their positions in society, both as professionals and citizens, cannot be reduced to voting or paying taxes, nor can it encourage an uncritical allegiance to the «free-market».

Large differences in power between natural persons and legal persons (individuals and enterprises), allow substantial influence of business corporations on public policies and State affairs; powerful lobbies, deeply ingrained in the public administration, can not be deterred without a reconfiguration of state control and political authority; the fundamental change is economic, social, cultural and political, priority should not be given to growth, but to sustainability, human development, order and stability.

To achieve full active citizenry it is necessary to strengthen society organisations and a political will to implement legal dispositions; urbanization processes governed by real estate interests, concentration of jobs in distant areas, poor quality of life, urban violence, are inextricably intertwined, resulting in overall pollution, noise and massive con-

gestion; in the Global South, the apathy of population toward civic issues and the ghastly indifference to overspread corruption and criminality, in the streets and in official cabinets.

Definition of problems is hazardous, fragmented, and reduced by academic formats, mass-media headlines and market-place interests; part of the population, not subject to the struggle for survival, committed to their own private interests, persist in increasing personal and familial assets, using their influence to lead the enactment of laws that legitimize their political and economic status and secure the «freedom» to do as they please, despite of the destruction to natural and built environments and overall quality of life.

Public policies, research and teaching programmes usually deal with the «bubbles» in the surface (segmented issues), ignoring the real problems in the «boiling pot». Development proposals, technological solutions, bind nature as natural capital with financial domains, ignore social, cultural and environmental impacts, demand more resources and increase pollution and waste, without changing the perverse system of production, transport and consumption that plagues the world.

More critical than individual motives and morals, are the current paradigms of growth, power, wealth, work and freedom embedded into the cultural, social, political and economical institutions. According to Collins and Makowsky [3], three to five percent of influential elites (economic, political, educational, cultural, military, artistic, mediatic and entertainment) would be enough to transform the collective mindset and change the course of the events, but will they move as the privileged beneficiaries of the system?

Education may question, innovate and create, develop self-confidence and organizational skills, recognize the powerful forces that drive the status quo, but it can also extinguish curiosity and innovation, encouraging acceptance of unsustainable living as being normal [11]; education cannot prosper in a context of weakening social bonds, social fragmentation, power as domination, wealth as predatory exploitation, growth as unlimited expansion, work as segmented specialization [6].

Education as a whole, and environmental and sustainability education in particular, are limited in their ability to make a difference to assure a sustainable future [8]. Whilst environmental education in schools help to normalize environmental values, children will take cues for appropriate behavior from the media, peer group and society as a whole [1]; educational processes are not compatible with trying to put new patches on ruptured tissues, but must contribute to create a new tissue.

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 [5]. Instead of surrendering to specialisation and fragmentation, education should emphasize holistic views, physical, social and mental wellbeing, the promotion of the equilibrium between natural and man-made environments.

Global governance can only be legitimized from ethical principles, in which the character of people and organizations are the fundamental element for the changes, not just the development of capabilities, knowledge and skills [8]. Cross-cutting programmes imply a change of focus and procedures in different areas of production, distribution, consumption and discard. This implies moving against forces that are too powerful to succumb to a direct attack by «civil society» or global citizens movements.

For how much longer will this small and fragile planet be trapped by man's own stupidity? Could a global citizenship and a global government be the next step to a natural (though not inevitable) evolution of human history [8]? Or will a global government continue in the hands of a devastating web of «egocentric producers and consumers» [2], while conscious citizens remain defenseless, due to the asymmetry of power between them and big business corporations?

A cultural pathology can not be broken by any nation or entity: while the common good succumbs to the false propaganda of the unlimited gifts of nature, powerful «lobbies», circulate around the holders of political and economic power worldwide, and, deeply rooted in the public administration, endorse the expansion of mega projects that deplete natural and cultural resources. Principles and ideas, values and genuine communication are replaced by jargon, slogans and self-serving propaganda.

Public opinion can be manipulated by marketing and advertising strategies (powerful tools of persuasion in today's world), using information from research and experiments in social psychology, psychology of learning, and communication strategies by the public media (radio, television, press). Will the United Nations be able to deal with trade and environment and strengthen compulsory guidelines on the use of shared natural resources and environmental impact assessment?

Unfortunately, the dominant political-technological-economical establishment changed the philosopher's «I think» to «I measure» (therefore I am), a new logo ingrained nowadays in all aspects of human life, accepted by academic formats, public policies and marketing interests and pervading the environmental, institutional and cultural extensions and relationships of man's being-in-the-world, with the consequent loss of sensitivity and ability to discern and implement aesthetic, ethical and cultural values.

Ephemeral and predatory production and consumption culminates in the tragedy of an unhealthy world, unjust, violent, without beauty, where many people doubt whether it is worth living. «In the beginning», «God» made different species grow, flowers and fruits bloom, birds embellish the landscape with their feathers and songs; unfortunately, they were at the mercy of man's good will and intelligence, which should «rightly conduct his reason and seek truth in the sciences» [4].

A «world-system» has boundaries, structures, member groups, rules of legitimation, and coherence; «it is made up of the conflicting forces which hold it together by tension and tear it apart as each group seeks to remold it to its advantage; it has a life-span over which its characteristics change in some respects and remain stable in others» [12, p. 347—57]. A process of change must be associated with an ecosystemic model of culture, as new agents emerge in the socio-cultural learning niches [7].

In the ecosystemic approach, four dimensions of being-in-the-world are entangled (Table 1), as donors and recipients, as they induce the events (deficits and assets), cope with consequences (desired or undesired) and change or maintain the status quo (potential outputs): intimate (subject's cognitive and affective processes), interactive (groups' mutual support and values), social (political, economical and cultural systems) and biophysical (biological endowment, natural and man-made environments).

Individuals do not «make the system», the focus of change is not people, but the system in which they operate, the conditions set out by the paradigms of growth, power, wealth, work and freedom embedded in the core of social, cultural political and economic institutions, continuously flaunted by the mass media, «opinion leaders», and the propaganda of public and private entities, that disguise their political and economic vested interests with the false pretence of promoting the «common good».

To understand our times, it would be interesting to remember a science fiction story entitled «Beachhead» [9], which recounts the arrival of a spaceship from Earth to a far away planet, in an advanced technical condition that would prevent any material damage or risks for human beings, thanks to the high technology that people imagine the future might hold (the writer begins his short story with these words: «There was nothing, absolutely nothing, that could stop a human planetary survey party»).

Table I

Interplay of the Dimensions of the World as Donors and Recipients in the Eco-systemic Model of Culture	
From Intimate Dimension (Individuals)	
To Intimate Dimension	Resilience: subjects receive from themselves the enabling conditions for existential control to face life challenges, for development, both in the cognitive and affective domains (open-ended evolution).
To Interactive Dimension	Cooperation: groups and networks receive from their members cognitive and affective support to perform collective tasks (participants help each other, offer advice, listen to each other, show solidarity, feel others needs)
To Social Dimension	Citizenship: societies benefit from proactive and committed individuals, who perform their social roles with a public regard and collective responsibility.
To Biophysical Dimension	Care: natural and built environments receive the attention of individuals sensitive to ecosystems balance, architecture, landscapes, beings and things.
From Interactive Dimension (Groups and Networks)	
To Intimate Dimension	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).
To Interactive Dimension	Cohesiveness: groups and networks develop a climate of mutual support and a set of attitudes of reception and respect for each other in view of collective tasks and processes.
To Social Dimension	Partnerships: societies benefit of networks and organized groups that sustain the cultural and social tissue, including families, peers (primary groups) and every other organized associations (secondary groups).
To Biophysical Dimension	Preservation: natural and built environments benefit from the care of groups and networks, which (as specialized groups or concerned organizations), actively preserve ecosystems, beings and things.
From Social Dimension (Culture, Education, Governance)	
To Intimate Dimension	Services: individuals are promoted as citizens by societies which care for culture, education, health, employment, leisure, transport, shelter, security, etc (enhanced citizenship).
To Interactive Dimension	Diversity: groups and networks benefit from democratic societies which permit diversity of association on religious, cultural, political and economical grounds that take into account the respect for others and the collective well fare.

To Social Dimension	Quality of Life: proper social, cultural, educational, political and economical conditions conducive to quality of life at all levels, providing the necessary services to promote citizens well fare.
To Biophysical Dimension	Sustenance: natural and built environments are sustained by societies concerned with policies and services aimed at the equilibrium of ecosystems, securing biodiversity, architecture, landscapes, locomotion, dwellings and all the conditions for adequate live-ability.
	From Biophysical Dimension
To all Dimensions	Vitality: environmental niches sustenance, variety; adequate natural and man-made environments provide to individuals, groups and societies biophysical equilibrium and the necessary conditions to develop physical, social and mental health, enhancing the quality of life.

As described in this short story, the landing area was literally sterilized, while sophisticated robots would respond immediately to any external threat, judged non-existent after the arrival of a harmless humanoid, without any apparatus, resembling rather a matchstick, which accepted the receiver-transmitter-translator offered by the ship's commander to establish an initial contact, in view of a good neighbour policy:

«We come in peace, we are friends, we'll teach you, we brought new things to you,» he said. «You should not have come, you will never leave, you will die here,» replied the native in a cold, logical and matter-of-fact statement. Judging that he was being threatened, the commander bluffed: «Dying, what is dying?» The native simply conveyed a feeling of disgust, ended the conversation and plunged into the woods.

It was not a threat: in the next expedition to the native's village, the clocks stopped, communications were interrupted, robots fell to the ground and the ship did not respond to the commands. There was something on the planet that human's advanced technology was unable to detect or control, that prevented the use of any equipment and that was why the natives did not have any sophisticated implement.

«Since man is the measure of all things» (Protagoras), the humans were limited by their own measures and could not predict the unknown, the unimaginable, which escaped from their own experience. And it was no surprise the melancholic destiny of the expedition, trapped forever by unknown forces in a strange and desolate world, where the captain of the ship experienced, for the first time, the futility of human ingenuity.

Are the influential elites of our times following the same course of the illfated planetary trip of this science fiction story? Readers of the Bible believe that apocalyptic prophesies are already in course: geological catastrophes, ecological disasters, climate change, social and economic imbalances, wars, famine, pestilence and death. Nothing can be done but «to ask God to abbreviate these days of torment»? Can we still thrust on «men of good will» to save the world?

References:

1. Bedford T., *Parliament Committee on Environmental Audit*. United Kingdom, 2002. [online] <http://www.publications.parliament.uk/pa/cm200203/cmselect/cmenvaud/472/3022702.htm>
2. Chermayeff S. & Tzonis A. *Shape of Community, Realization of Human Potential*. Middlesex, Penguin Books, 1971.
3. Collins R. and Makowsky M. *The Discovery of Society*, McGraw-Hill, New York, 2009.
4. Descartes R. *Le Discours de la Méthode*, Flammarion, Paris, 2000.
5. Krol G. -J. Environmental problems, morals and incentives in modern societies. Institute of Economic Education, University of Münster, 2005 [online] <http://www.wiwi.unimuenster.de/ioeb/downloads/forschen/Krol/EnvironmentalProblems.pdf>
6. O' Sullivan P. E. Environment science and environment philosophy. *The Int'l J. of Environment Studies*, 28; 257—267, 1987.
7. Pilon A. F. The Bubbles or the Boiling Pot? An Ecosystemic Approach to Culture, Environment and Quality of Life. *Herald of the International Academy of Science (Health & Ecology)*, Russian Section, Moscow, 1, 2007: 31—38 [on line] http://www.heraldrsias.ru/download/articles/05_Article_Pilon.pdf
8. Paehlke, R. C. *Democracy's Dilemma: Environment, Social Equity, and the Global Economy*, The MIT Press, Cambridge, 2004.
9. Simak C. *Strangers in the Universe*, Faber and Faber, London, 1958.
10. Sterling S. *Whole Systems Thinking as a Basis for Paradigm Change in Education: Explorations in the Context of Sustainability*. Doctoral Thesis, University of Bath, 2003. [online] <http://www.bath.ac.uk/cee/sterling/sterlingtitle.pdf>
11. Unesco K. *Education for sustainable development: a holistic approach to envisioning change and thereby achieving transformation*. Steering Committee on Education for Sustainable Development, 2013 [on line] <http://www.unesco.org/fileadmin/DAM/env/esd/8thMeetSC/ece.cer.ac.13.2013.4e.pdf>
12. Wallerstein I. *The Modern World-System*, New York, Academic Press, 1974.

Информация об авторе

Андре Франциско Пилон — доцент Университета Сан-Пауло, Бразилия, международный эксперт в области экологии, защиты окружающей среды, создания безотходных технологий.

Author's e-mail address: gaiarine@usp.br

For the author's public profile and selected publications, please see the website: <https://usp-br.academia.edu/Andr%C3%A9FranciscoPilon/CurriculumVitae>