

The long way towards a social and ecological economy: how do we change the paradigm?

The underlining assumption of this paper is that the formulation of a new societal paradigm cannot start anywhere else than within the single components of the society, that is the individuals, rather than from the societal structures. Consequently, any robust critique needs to begin with a critique of the critics themselves, which in this case are us and the scientific community. Therefore this investigation provocatively started with a critique of our understanding to *sustainability* and, in the context of this conference, of sustainable Degrowth. The concept of sustainability is taught to any environmental science scholar; virtually, it is the founding stone of social science discourses, the horizon of planners worldwide and the primary objective of environmental scientists. The well-known three dimensions of sustainability, environmental, social and economic, even became a world famous sustainability slogan, “Planet, People and Profit (or Prosperity)”. Nevertheless, when science goes into details the purpose of knowledge production is often lost; scientists are primarily concerned in optimizing their own result and tools, getting them published and funding following researches (often the only way to keep the job). Over concerned about producing perfect ‘bricks’, we forget in which part of the building they were supposed to be employed. The final challenge, the most meaningful, that is making all those bricks fit together, is overlooked or quickly dismissed. We see extremely complex and accurate economic equilibrium models failing to account for natural resources (land, marine, water resources ecc.); we have advanced environmental life cycle assessment only partially and superficially accounting for social and economic impacts on local communities; we see on one hand post-Marxists, critical theorists, political ecologists debating upon the excessive power of financial capital and corporations, failing to explain how the world would meet the savage demand of goods, once the system that supplies them would have been substituted; on the other hand Degrowth advocates questioning precisely that savage demand of goods, failing to explain how we can convince seven billion people that *less* might mean *more*, rowing against global political and economic vested interest.

In order to further explain the limit and obstacles towards the definition of a sustainable societal paradigm, here it is proposed as a tangible example the case of sustainable land use. Land availability and land use changes are one of the hotspots in the complex relationships between natural resource management and human society. Land also perfectly embodies the commons and the human right to their access, as cultural and natural resources accessible to all members of a society. Land is also a case in which nature-society relations intertwine. The word ‘land’ could easily be replaced with sea, water, biodiversity, clean air, health etc, and the common symmetrically re-contextualised. In fact, the increasing consumption of food, fodder, fiber, bioenergy and need of land for carbon sink poses an enormous pressure on the global demand for land as well as other commons. In this study a variety of land use models have been reviewed. The goal was to assess to what extent they cover the three dimension of sustainability and thus how reliable they are in providing guidelines and suggesting policies. The results showed that land use and land use changes effects have been investigated and modeled to a large extent one-dimensionally: by economists through equilibrium models, by environmental scientist through geographical models and life cycle assessment framework, by social scientist looking at the relationships between increasing land demand, indigenous land use rights and land grabbing phenomena. Policy and decision makers are expected to assess these impacts, in order to take sustainable sound decisions. However, the results of those approaches are consistently different and there is still missing consensus in the scientific community on their validity. Additionally, those studies even when valuable and robust, tend to be focus only on one or two aspects of

sustainability and often do not even cover them completely: the results might be reliable but if considered as a result of a 'black box' and taken out of context, may lead to seriously misleading conclusions. For example, when using economic equilibrium theory, land use models are based on the assumption that supply and demand influence goods' prices, until the equilibrium point "Supply=demand" determining the price is reached; a supply/demand change affects the price, until a new equilibrium is reached. As land is a productive resource, every time an activity requires land, the equilibrium moves towards another point with a new configuration of land occupation, prices and supply/demand, of which the land use change effect can be estimated. While informing about *probable* future land uses, these models tell us little about the related environmental consequences: they do not distinguish in details (or at all) between agro-ecological zones, climatic areas, land primary productivity, local water resources, social and countries' political context. Similarly, result of environmental life cycle assessment of land use *might* point out industrial farming as more land use efficient compared to local production, especially in developing contexts; but tell us nothing concerning whether transnational corporation and financial capitals speculate behind industrial agricultural production and foster land and water grabbing, with related devastating social effects. Yet, geographers might point out land intensification as a strategy to reduce land use demand but are usually not concerned about assessing whether and to what extent intensification can take place at a global level and with which consequences.

There are proven cases in which scientific tools are intentionally misused to support coloured and vested interests. However, there are evidences that in many cases, even though in 'good faith', scientists provide misleading results, because those results are partial or focus on a specific aspect of sustainability, while are presented as comprehensive and conclusive. John McMurtry in '*The cancer stage of capitalism*', talks about *non-living corporate conglomerates invading and attacking to death their social and environmental life-hosts*; a cancer indeed. Capitalism is a disease out of control rather than a strategic plan of vested interests: there is simply no long-term plan. This frightening interpretation points out the role of science in society: there is an urgent need of a collective effort intent on sorting the puzzle of modern society; a quest for bridging knowledge to contest the economic and societal structure of modern world and defeat this cancer. It is necessary to provide an antidote, a new tangible horizon; that passes through a complex system analysis, a comprehensive and integrated *sustainability assessments*, capable of merging the strength of different scientific fields. We need to establish the solid foundation on which an alternative, yet homogeneous, paradigm might be framed and supported with lesser struggles. But to engage in this struggle, we first and foremost need to change our own approach and the academic context itself. We need to abandon the senseless rush towards publication. We must regain the freedom of striving for quality, rather than quantity, of redundant information; fight the bureaucratization of knowledge, break the cage of narcissism, eradicate individualism. A critical approach alone it is commendable and might unveil the contradiction of an agonizing societal system, but it is not sufficient to subvert it.

Key words: *sustainability, system analysis, academic knowledge production, society-nature relations, land use.*