

# Chapter 1

## Environmental Rationality: Innovation in Thinking for Sustainability

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### ABSTRACT

*Renovating our thinking as humankind (rethinking nature, culture and development) is an imperative to approach the challenges of environmental crisis and to orient the social construction of a sustainable world. If environmental crisis is a predicament of knowledge, beyond the task of reinventing science, innovating technology and managing information, we must face the challenge of inventing new ways of thinking, organizing and acting in the world; of reorienting our ethical principles, modes of production and social practices for the construction of a sustainable civilization. Innovation for sustainability is drawn by alternative rationalities. I will argue that rationality of modernity has limited capacities to reestablish the ecological balance of the planet, while environmental rationality opens new perspectives to sustainability: the construction of a new economic paradigm based on neguentropic productivity, a politics of difference and an ethic of otherness. Paramount to this purpose is the contribution of Latin American Environmental Thinking.*

### INTRODUCTION

Since Antiquity, the cosmic, natural, biological and social order, have been conceived as an ongoing process of “emergence.” Thus, metaphysics thought ontology as the “generativity of physics” and Darwinian biology thought nature as the evo-

lution of life forms. Innovation became the core concept of such emergence in the modern social order, as a result of the Enlightenment of Reason that intended to brighten the darkness of the Middle Ages, to bring transparency to reality through true knowledge, to make conscious the unconscious and to enlighten the human soul. Innovation is in the heart and at the roots of modern rationality;

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it is what mobilizes progress as a self-contained process within the rationality that produced it. Thus, innovation became a mechanism inbuilt in economic rationality for the continuous renovation of the conditions of production and the unlimited expansion of the economy with the purpose of granting to humanity the well being promised by modernity.

Modernity is thus defined as the era of progress, of development, of novelty that ages and is renewed in unprecedented forms, in an infinite process that demands unendless creativity and that gears the rationalization of social organization towards its ends through unlimited growth. Thus unquestioned, innovation was inscribed and institutionalized in economic rationality; it was embodied in our mode of thinking and imbedded in our mode of production, until it reached the limits of nature and of human life. The environmental crisis unveiled the unsustainable trends of the economic process: the entropic death of the planet, the erosion of living forms, the degradation of life supporting ecosystems and the fading out of the meaning of life.

Can this crisis of modernity be solved by the “reflexion of modernity” over its theoretical and scientific foundations, over its technological and instrumental means: by revolutions of science and management of positive knowledge; by innovations in technology and developments in social organization? Is ecological and complex thinking an emergence that can innovate and ecologyze a new world order? Is environmental rationality a new conception of human life on Earth that can guide the social construction of a sustainable future?

The purpose of this chapter is to reflect on the key importance of innovating in the ways of thinking our place as human beings in our living planet (our thinking on nature, culture and development) to be able to face the challenges of environmental crisis and to orient the social construction of a sustainable world. If environmental crisis is at its origins and its basis a *crisis of knowledge*, we

should not only promote innovations in science, knowledge management, technological change and behavioural shifts, but we must derive new ways of thinking the world, new ethical principles and new forms of knowing to orient new modes of production and social practices for the construction of a sustainable civilization. That is what environmental rationality intends to offer to the world in crisis (Leff, 2001, 2006).

Innovation of knowledge has been established in the economic world order and in the social system as an already in-set mechanism that produces novelties triggered by a mode of thinking that is “developed” in the way that science is finalized by technology as the maturing of its theoretical principles leading to their technical applications for the solution of socio-economic problems (Böhme et al., 1976); or the way in which Bachelard thought of the new rationalism as the *incorporation of the conditions of the application of a concept in the sense of the concept itself* (Bachelard, 1949). Thus the real economy is the expression of economic rationality: a world system revolving in its same axis and closed in itself.

If knowledge is thus geared and oriented by its internal motives and the inertia of its trends towards the growth of the economic system, then, to what extent can scientific revolutions and technological innovation readapt to the ecological conditions imposed by the laws of nature and cultural meanings to open civilization to a truly sustainable world order? This impasse in the self-reflection of modernity over its own matrix of rationality leads us to inquire if a change of rationality is needed and if such a novelty in human history is possible. We should ask ourselves if a sustainable future can be contained in the dialectical transcendence of the present world already inscribed in in the becoming of Being drawn by the destiny of the techno-economic rationality that organizes the present world order challenged by environmental crisis and unsustainability, or if new thinking can bring about and open new paths towards the construction of a sustainable world order.

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