

Chapter 6

The Ecological Industrialism Bet

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ABSTRACT

The sustainable growth dilemma requires providing well-matched prosperity to current citizens, aimed at preserving suited life-quality standards. Currently, civilization intentionally alters the surrounding wilderness. The changes include using biological sources (agricultural revolution) and energy supplies (industrial revolution) purposefully promoted and performed by men. The modern growth decisively exploits skilful provisions acquired from fossil and fissile earth stocks, through totally technical and non-conservative ways. The instant disadvantages of this are paid by contamination, inexorably altering the bio-sphere. The engineer's doings in the new millennium have to cope with ecological quality objectives, curbing the industrialism practices, in view to provide visibility of all induced changes and to apply the responsible recovery measures. Here, the overview of the state of the art is shown, in particular addressing the design of "product-service" items, deliberately considering the early specifications for the lifecycle and the dismissal phases, and the integration prerequisites in the supply chain management, explaining the usefulness of network aids and the connected commercial modifications. The challenge is extraordinary and involves socio-cultural aspects, too. The discussion, although offering sketchy images, concerns technical suggestions, basically limited to assessing the life cycle eco-coherence as total company challenge. The business design conditions embed compulsory legal issues, requiring worldwide management.

INTRODUCTION

The world progress is appraised through the enjoyed life-quality, i.e., the privileged circumstances built by the men, yielding planned prosperity and authenticity, relative to the earth original dearth

and wilderness. The civilization is combined issue of political arrangements, establishing effective cohesion orders, and of economic organizations, allowing fair affluence and influence balance. The progress is artificial paradigm, brought forth by the relational intelligence of the Homo sapiens, an awkward talent, which discriminates the human personality from all other living beings. The

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chapter intends analysing how the combined issue develops, figuring out hypotheses about wished future deployments. The ecology, pointing out the over-consumption and over-pollution practices of the industrialism, is impending warning, making growth sustainability a crucial theme of current citizens (Hitchens, 1999; Rogers, 2010; Tanuro, 2011; Troccoli, 2009; Victor, 2011; Ward, 2007; Wills, 2009; Zobaa, 2011).

The naïve solution “do not consume and do not pollute” conflicts with the needed availability of *artificial* energy. The consequence brings forth lowered prosperity and, quite soon, depressed life-quality trends.

The prospected sceneries assume that the world progress, being intentional man construction, can have chances to continue, preserving its *artificial* character, just modifying the sources from where the value-added is achieved. Indeed, the industrialism productivity is combined issue of:

- The transformation of tangibles, with the concomitant decay (entropy increasing);
- The development of intangibles, with the parallel cultural and ethical by-products.

The postulation avails of the civilisation by-gone deployments. The history narration takes for sure that men construe useful world models and benefit from communal planned actions, providing value-added outcomes. The engineer prefers leaving out transcendental or immanent motivations of the intangible developments. If we cannot prove an outside origin, the “rationality” is a self-supporting drive: willing or not, we are forced to credit the planned progress, as opposed to the primeval savagery.

The *artificial* basis of the cultural “mind worlds” is *singularity*, actually occurred, to make feasible the rationality-driven development of intangibles. Indeed, the evolutionism assumes the “natural selection” to be “general principle,” viz. “the differential amplification of some specific features within a population of items, to enhance

the fitness to extant surrounding stimuli.” The principle understands the *agentive character* of the life phenomena, saying that the current traits of the living beings are adaptive. The “*gene* evolution” develops along with the “genome” information modifications.

So far, no evidence shows that the “natural selection” is a *universal* law, which applies beyond the biology of (constantly *genetically* renewed) species. The process is assumed to affect the making of the separate immune system (up-dated by *somatic evolution*). In fact, each individual does not, simply, describe by its DNA, being the result of a “genetic scenery,” entailing, maybe, the bunch of trillion unlike organisms, which cooperate or conflict in unison. The “virome,” after the “genome,” project is, thus, devised, to identify our own biological status.

Contrarily, the man civilisation is supposed to be issue of the “relational intelligence” oddity, which superimposes, grounded on the “mind” *singularity*. The creation of the awkward intangible worlds, with culture and ethics substance, brings-in the *memetic evolution*, encompassing the outcomes of the “reasonable” knowledge. At variance with “gene,” the “meme” is a *replication* that generates “mind categories” fit for *intelligent* behaviour, i.e., *artificial* creations without deterministic loops, but with intentional thinking.

If the sketched frame is true, “life” and “intelligence” are, both, *creative* processes, bringing forth up-dated individuals, widening their *fitness* features. The creation of the increased *fitness* (locally) opposes to the entropy growth. The “life” structures establish *planned* living bodies, characterised by inborn “order imprint” (identified by DNA), so, “*gene* evolution” leads to *species*, with inherited characters. The “knowledge development” ends in culture and ethics objects, shared as combined heritage, and exploited by the *communal* “order imprints” of the organised social structures. The “natural” or “artificial” character distinguishes these processes and outcomes.

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