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“EcoSophic Game-Design”: Towards a Playful BioTopical Architecture
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Abstract

Based on Felix Guattari’s approach in his book *“The Three Ecologies”*, through which he first introduces the term *“Ecosophy”*, as a means of a conceptual co-consideration of the three basic – according to him– ecological aspects (Environmental, Social and Mental Ecology), the current proposal attempts to present and describe the concept of *“EcoSophic Design”* (ESD). Considered as an architectural tool, as well as an educating method, ESD introduces itself as an Ideal, able to respond appropriately to the crucial environmental, socio-political and inter-cultural demands of a Post-Crisis World Reality.

Beginning essentially from the design principles of *Bioclimatic Landscape Architecture, through low-tech natural building techniques*, ESD adds a most important functional parameter; the ability for a *qualitative food production, through Organic Farming* (countryside or urban). To that direction, it encompasses the principles of *“PermaCulture”* (Permanent Agriculture - PC), an interdisciplinary design method, that aims for the intelligent *Design & Construction of Regenerative Productive Ecosystems*. By that, we refer to *dynamic networks of multifunctional elements-factors generated through energy harvesting and recycling processes, in order to maximize the use of renewable power and material resources, plus minimizing the costs in human toil* (thus enforcing, to some extent, the independence from traditional profit-driven economical strategies and the counterpart forms of political dominance).

Furthermore, ESD, as it is intimately related to the spheres of “social and mental ecology”, has to focus at the same time in its (self-)educational purposes. From our perspective, this is where certain *Game-based Learning Methods* are becoming most applicable. To such a direction, the concept of *“Smart Gamification”* refers to an intelligent composition of an open “narrative” plot, able to incorporate a wide range of desirable game genres and play forms, from personal challenges with toys and other interactive devices to massive multiplayer “meta-games”, in ways that can power an expedient pedagogical interface about ESD principles.

On Gameology

The terms “Game” and “Play” have been continuously designated throughout the past few years as central concepts or even as main methodological tools for many distinguished subjects of basic and applied research, within a wide range of cognitive fields, relative to “Human Studies” as well as to the so-called “Positive Sciences”. Arguably, this phenomenon is related to the exponential development in digital entertainment and info-communication technologies, especially to the dizzy growth of Electronic Game Industry (EGI); having overcome – in financial terms- the cinema industry, EGI has reached out to give impulse even for the formation of new academic branches (such as Gameology, Game Design Studies etc.).

Of course, this kind of cultural evolution could not leave the fields of architectural and urban design unaffected. Far from the potentiality of a final definition of “play” and “game”, it is a rather common assumption that these terms, apart from being subjects of theoretical treatment (eg, as special regulatory typologies, as intertemporal cultural phenomena with special functional and symbolic significance or even as “universal” philosophical concepts), are at the first place referring to specific -individual or collective- *activities*. These activities are not just conditions of interaction, in the broad sense of a bidirectional sensory relationship between people and their space-time environment, but an interactive relationship par excellence “influential”, insofar it derives special “meaning” through systems of specific rules, targets and symbolic representations.

Play, Game and Space

In that sense, gaming, whether related to direct material footprints or not, is introduced as an significant additional way of interventions in space, both as an object and a means of an interscale design process that is able to bring special opportunities for a meaningful interactive entertainment and (self-)education, enabling dynamic fields of public expression and socialization. On these grounds, we believe it is worth stressing out the large functional benefits and symbolic values that can be gained through the implementation of “playful interactivity”, in order to be established as a condition necessary for the generation of active relationships within public space. We consider this as a key parameter for the design and the construction of the elements composing public space, in the prospect of an “overall” cultural upgrade, that could increase the likelihood of a successful response to the multiple functional, aesthetic, ecological and socio-political demands.

The Vision of a “Playful Landscape”

Since the one-way message transmission and the dominance of the dipole production-consumption in the cultural sphere, to the era of globalized market and internet, we can identify a paradigm shift in the way the city itself and primarily its public space are rendered thinkable. From the late 90’s until today, interactivity appears again as a central conceptual reference with valuable influence over issues related to urban planning in the “meta-modern” metropolitan reality. As part of this shift, the vision of «Playful City» (Ludic City), as expressed during the 50’s and 60’s by H. Lefebvre, the Situationists, by Constant and his plans for “New Babylon”, by Y. Friedmann, the groups of Archigram, Superstudio etc. (the references are frequent in a grade of banality), is now making a comeback, in different socio-historical contexts, as one of the most central claims. Through a rhetoric that praises the qualities of playful interactivity, of wandering, of open-network resources, of changing platforms, of adaptive environments etc., which appear as additional tools in attaining direct-democratic policies in space, in order to meet the increased request for a broad social participation at all levels, this trend becomes more evident in contemporary times, where more “futuristic” approaches refer to “Smart Cities”, which will utilize the rapidly evolving digital technologies, in order to resolve interactively - and "playfully" their complexed functional, environmental and social problems. On that basis, we could go further from urban space to wider regions and talk about “Smart Landscapes”, respectively enhanced with playful dimensions.

“Augmented Reality” Smart Gamification

On that basis, ESD embraces the idea of *Smart Gamification*, a kind of “scripting” process which aims to engage space-time elements-factors of all types, scales and functions (architectural, environmental etc.), into some sort of an expedient game plot. To that direction, the newly-acquired category of “Augmented Reality Games” (ARGs) has begun to gain attention. The notion is used so as to describe a “hybrid” kind of game, constituted as a mixture of digital and non-digital gameplay elements. Following, to some extent, the moto of “*Back to Materiality*”, ARGs take place mainly in the “Real” public space-time, thus turning it into a *Gameboard* or a *PlayScape*.

Apart from their special space-time nature, ARGs tend to look up to some well-known (non-violent) game genres, mostly “Strategy”, “Role-Playing” and “Adventure” Games. Speaking specifically on the last, we have to clarify our main reference to games whose plot is based on a variety of mental and physical challenges, such as Quest-Inquiry and Problem-Solving activities. These are carried out mostly through “cryptic” elements, namely enigmas, riddles, puzzles (mechanical, topo-logical, space-perceptive, “synesthetic” etc.), which are nominated for their highly entertaining and self-educational value.

The broad cultural significance of the Cryptic.

From ancient philosophical questions to current scientific problems, from the Great Sphinx and her famous enigmas to the contemporary psychoanalytic approach (that envisages human subconscious as a complexed self-referential riddle-puzzle of uncertain solvability), it is arguable that the “Cryptic” in general has played a most significant role throughout the history of human culture.

It is also clear that the concept of Cryptic is governed by an extensive polysemy, so that is somehow cryptic itself. For convenience and economy of space, we outset to clarify that in this text, we chose to adopt a concept of cryptic expanded enough, so that it may include anything that is able to induce a kind of mental challenge (from logical problems, arithmetic, geometric, topological or mechanical relationships, and interconnections to issues that deal with complex scientific, philosophical concepts etc.). It must be emphasized that this concept (at least in the way we want to use it), does not refer exclusively to a linear process leading to a predetermined final solution, but it can be incorporated in open structures, adequate to allow various relationships between different components. At the same time, these structures can be responsive to multiple contents, so that their design can use, with creative intelligence, ideas and information drawn from a wide range of possible influences. In other words, any single observation, labeling, information, trace element, knowledge or concept can be utilized for the design and construction of many kinds Combinational Riddles (Puzzles, Enigmas etc.) in a synthetic way that favors correlations between various scientific, philosophical or artistic fields, thus creating fertile ground, not only for an interlayer, multifunctional response in real space, but also for the development and the methodological justification of an interdisciplinary approach in theory. Such a non-metaphysical, non-deterministic nature is attempted to be described by the concept of "meta-Cryptic".

Summarizing, we note that meta-Cryptics (dynamic forms of "inter-sensory" combinatorial Riddle-Puzzles), as carriers of additional meaning that enhances the mental-cognitive aspect of game, combined with the psychic stimulation - and the emotional reward - that usually accompanies the effort to resolve them, come to help in producing a variety of sensory stimuli that aims for the *mobilization of the desire for exploration, the deepening of observation, the challenge of innovative ingenuity, the enhancement of combinatorial capability and synthetic thinking*. We estimate that such playful activities, in addition to being able to deliver a "sublime" and memorable aesthetic satisfaction, can bring along a particular pedagogical value, as on the basis of this multidisciplinary - at the same time individual and collective, mental and physical, interactive and "synesthetic" - dimension of meta-Cryptics, it is possible to develop a more attractive, less forced, so in a sense, appropriate pedagogical method, which may exceed the - unsuccessful in our opinion - traditional educational standards that promote hierarchical relationships and unfair competitiveness, and be addressed potentially to the whole range of ages and social layers, cultivating forms of unmediated and more cooperative social interaction. In that sense, our proposal gains a clear ideological sign, as part of a political project for collective self-education, which is considered as better able to effectively respond to the demands of the "ecosophic" trinity, reaching beyond the joy-of-discovery, to the fulfillment of (self-)understanding, creativity and ultimately life itself.

Gamifying EcoSophic Design

As a Case-Study our research aims for the constitution of a dynamic plot for an *AR Multi-MetaGame*, to be implied in the public space of the City-of-the-Future, in a way that can power a pedagogical interface about ESD principles. For example, cryptic elements, structured as an open network of inter-sensory combinatorial riddle-puzzles, can be embedded as hidden messages throughout the urban "porosity" or "materialized" by low-scale constructions, as parts of urban equipment; alternatives of the as yet existing or new ones. The last, could be "derived" from innovative design proposals for new *Urban Eco-Attractors*. By that, we are referring to specific *multi-functional interactive devices* (that can also serve as *dynamic accumulators of symbolic meaning*), which are to be strategically interspersed in vital points along the public space network, as main nodes whose interconnections could create a "playful ecosystem".

Thus, "inquiring playfulness" aims to a radical redefinition of urban landscape; one that could provide to all bearers of urbanity a -not only exciting- but also highly educative medium of living, enjoying, collectively managing and creatively reinhabiting the Commons of a Sustainable City that wants to play an important role in the "playscape" of a possible post-crisis global society.