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Urban Architecture as *connective-collective* intelligence. Nodes and resources of ‘sustainable developments’ in times of crisis.

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Abstract: During the 20th century, with the advent of the industrial society and globalization, the language of planning changed according to the shifts in perception and use of physical space. By borrowing terms and spatial forms from biology and cybernetics, it increased their original semantic connotations. This paper outlines when the definition of architecture as *connective-collective intelligence* moved from cognitive sciences to urban design, where spontaneous and collective initiatives that redefined communication forms of urban life multiplied and intensified, both in developments and public space until it even affected the procedure of transmission of traditional knowledge.

Keywords: Urban architecture; Sustainable developments; City as a ‘complex adaptive system; ‘Thinkering’; ‘Uncertain models’; ‘Collective mind’.

1. Introduction

During the 20th century, with the advent of the industrial society and globalization, the language of planning changed according to the shifts in perception and the use of physical space. By borrowing terms and spatial forms [1] from biology and cybernetics, their original semantic connotations increased. The paper's subject is the perceptive mutation of the idea of city in a perspective of complex systems. Its aim is to verify through examples and applications how disciplinary crossbreeding, the holistic approach and the establishing of connective networks (the so called cognitive-connective intelligence) can prompt transformations in the use of open, built, public and private spaces with an innovative physical layout and aggregative modalities that overcome the traditional urban governance and space design practice.

A short excursus into the evolution of language, the interdisciplinary conception of the architecture of the contemporary city and its subjective/objective crossbreeding to account for possible paths in new urban contexts in order to sketch present and future feasible solutions.

1.1 Art, Space and Science: Crosses and Crossbreeding

Pierre Levy's statement "[...] *we are building a humanity which seems closer to itself*" pointed out how the burst of cybernetics in everyday life glorified the collective and biological-cognitive functions by accompanying, crossbreeding them, not replacing them to the laws of physics, optics and mechanics. This was the result of a shift in a long ontological and technological process that had been investigating the relationship between reality and subjective, between 'sensible' worlds, immaterial and separated 'kingdoms' – as the thread of continuity of current events shows, which started out in mainland Europe and America during the second half of the 20th century.

At the beginning of the 20th century, the German Biosoph *Ernst Haeckel* (1834-1919) was investigating biological marine forms to propose – on the basis of an excellent graphic system [2] – considerations and stimuli on 'alien' forms of life, still present in the sensible universe. The fortune and circulation of his work among scientists and educated people allowed 'spurious' artists with solid theoretical basis, such as *Hermann Obrist* (1862-1927) to tap into the inexhaustible formal, structural and semantic repertoire made of organic-shaped forms [3].

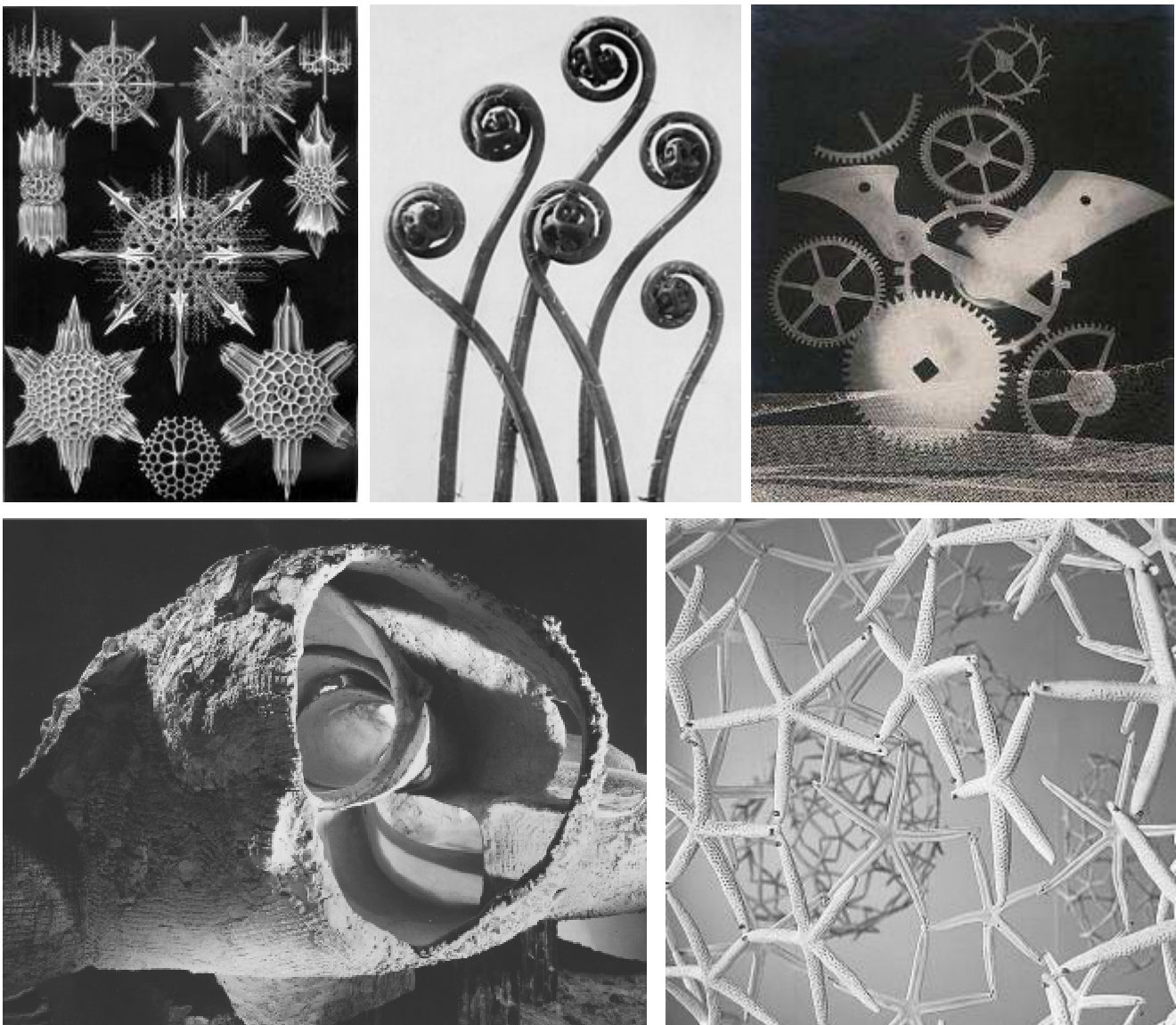
The novelty inherent to *Art Déco e Jugendstil* was not about invention but the fact that it faithfully reproduced, described and observed the objective physical reality, though in a different scale and integrally de-contextualised. Thanks to innovative photographic technologies and *Röntgen X-rays*, the scientist-artists of early 1900's investigated the matter and revolutionised the representation processes starting from the objective-subjective vision, utilizing modalities that were later known as 'Pop Art'.

Photographer-sculptor *Karl Blossfeld* (1865-1932) – spokesperson of the so called Poetic Darwinism – opened up to the crossbreed between art and science. He launched networks and logical-formal connections between daily routine and 'Urformen' (the primitive structures of organic matter) with the intent of investigating and reproducing its complexity and harmony [4].

Man Ray (1890-1976) started with the same premises but he imposed that sceptical side that belongs to 'Dada'. He experimented the effects of casually matching objects and situations in a voluntary process of randomization that created completely unexpected idiomatic expressions. To a certain extent, this attitude is similar to *Frederick John Kiesler's* theoretical and artistic work (1890-1965), the

spokesperson of *dynamic-spatial architecture*. Kiesler stated: “We want abodes where elasticity is like vital functions. [...] Let’s give people social security; let’s give builders the freedom to create; let’s give the industry scientific directives. Then, a popular architecture will gradually and naturally develop. Since, [its nature] is made up of the willingness to adapt to life’s circumstances, to the laws of society, to create and transform, for which it takes its own part of responsibility” (Excerpt from: ‘*Manifeste du Corréalisme*, 1949) [6].

Figure 1. (a) E. Haeckel, from ‘*Art Forms from the Ocean*’, 1904. (b) K. Blossfeld, *Haarfarn* from ‘*Urformen der Kunst*’, 1929, (c) Man Ray, *Clock Wheels* (1925). (d) F. J. Kiesler, *Endless House and its Psychological Lighting*, 1959. (e); M. F. Cardoso, *Woven water: submarine landscape*, 2003.



1.2 Architecture, Space and Science: Crosses and Crossbreeding

Kiesler’s biographical-cultural parable shows curious analogies with *Carlo Mollino* [7], also for the role that his teachings played in the architectonic thought of the second half of 20th century. His didactics interconnected forms, languages, abstract concepts and experimentations in a consistent crossbreeding and storytelling process, which continuously hovered between nature and artifice [8].

Almost a century after, theorists like Australian *Ross Rudesh Harley* and Colombian *Maria Fernanda Cardoso* are following in the same wake with the intent of starting up the cultural, artistic mix. They are experimenters of the *Cyberculture* where “*the bounds of media art practice, cinema, music, design, and architecture*” meet. *Marcos Novak* (b. 1957), is also a crossbreeding theorist, initiator and major exponent of ‘Liquid Architecture’ and ‘Transarchitecture’ trends. He utilizes mathematical algorithms to build hybrid and intelligent spaces, in order to create a new architecture [...] capable of merging the two worlds, real and virtual, generating a third one [9]. Novak states that “[...] *ideas are the invisible scaffolds upon which the real is constructed*”.

The history of architecture is a history of the increasing elaboration of invisible *scaffolds*. There are literal scaffolds and there are *information scaffolds* that connect *human interests and activities across the vastness of distance and knowledge*. [10]. And again, it was Novak (2000) who tried to demolish the traditional monolithicity of design disciplines to assimilate them to artificial sciences” [11], so that “*they are face-to-face with an unprecedented perspective: to extend design to all levels*”, in an architecture that has to accept and own the post-Euclidean dimension.

1.3 Web space and open systems: New accounts between time and space

For some decades the themes of continuity and space-time dimension have polarized the interest of visual artists and mass-media communication. The steady success of the cultural *time capsule* theme proves it: moving from cognitive sciences to cinema, literature and television. The TV series, *Lost*, is an extraordinary example; filmed using flashback, flash-forward and flash-sideways techniques, it proposes a non-linear reading of space-time, which is a parallel experimentation. According to *Edward De Bono*’s definition (b. 1933), *lateral* means structured as a hypertext that eventually merges in a unique narrative solution [12].

Regarding matters linked to cognitive science studies, i.e. the problem solving capability – sociologists, philosophers and psychologists have been utilised in the field of artificial intelligence and mass-media communication. In the early 1990’s, the theory of connective-collective intelligence was developed, thanks to the conversations that took place in Amsterdam between two collaborators and pupils of Marshall McLuhan, *Pierre Lèvy* e *Derrick De Kerkove*.

Yet, it is the latter that resumed and elaborated the concept of *collective intelligence* (Levy), as a product of the memory and of the collective imaginary, which becomes a project when the instruments that allow or encourage the interaction between individuals are made available. Its extension to the web suggests the development of the ‘connective intelligence theory’, where nodes are what matters, i.e. the relationship of intelligences.

The *connective intelligence* is an incremental factor, a multiplier of intelligences, made possible by their connection rather than their sum. It is no accident that the theories of connective intelligence by De Kerkove stemmed from Harley’s ideas.

According to whom, the idea of collective intelligence (closed container) must be overcome, because, it is the ‘web space’ that builds an ‘open system’, able to establish connections ‘from person to person’, inside a very specific network. The specificity of which is not represented by the collective container of knowledge. A valid example is the ‘*p2p*’ (*peer to peer*) exchange system.

2. Methodological Crossbreeding: Architecture as Connective Intelligence

Architectural design - including the one that refers to *Cyber culture* – has been criticized to be too self-referential. Showing disturbing analogies to politics, which is incapable of representing the reality and collective requests and values. The controversy has found several and reasonable opportunities to manifest, especially with regards to the scenographic, often inconsistent research for formal novelties, proposed by ‘*archistars*’, whose media impact on print and digital magazines has contributed to produce and proliferate across the country [13]. There is no doubt whatsoever that in the past two decades and in the current situation of crisis of economic development models, and of any other models, the debates over sustainability and de-growth confront each other. The holistic approach in the research of urban sustainable solutions moved from technological problem solving [14] – by proposing performing, adaptive and self-sufficient dynamic buildings – to the vision of the city as a ‘complex adaptive’. To manage this complex system, which at the same time is afoot of applicative potentialities, it is necessary to introduce ‘open systems’ and the *collective-connective intelligence* in the field of architectonic-urban design processes.

The multidisciplinary integration with social sciences, therefore, appears very appropriate and necessary to unblock the cultural impasse of metropolis and human communities development models. Today, the future of the city is not evaluated with axiomatic conceptions or economical algorithms, on the contrary, it is based on common practices of ‘*thinking*’ [15]: operative evaluations projected on ‘*uncertain models*’ [16] or ‘*resilient*’ [17] ones, in a global system prone to skepticism [18].

It is the point of view that refers to the theory of complex systems. It is still premature to evaluate the effects and relapses of this methodology on urban design, but it certainly generated an uncommon awareness, at a global level, of problems and their interdependency in human history. The rapid diffusion across the West of social networks promoted the connection between very far realities, subject to similarities/oppositions that are created exactly when searching for cultural reading levels that highlight salient points, encouraging in virtuous cases, a field observation, rather than virtual.

Through European case studies, the paper aims at investigating how such crossbreeding has permanently conditioned the perception and use of space through the tools offered by the internet. Space seen as a “*form of extension of the intelligence and private memory made collective*”. This means also to implement a change in the decisional rules and the governance by establishing a closer relationship with citizens or stakeholders.

3. Experimental Section

3.1 Case study a)

The Role of the Net: Active Citizenship and Urban Governance [the Biennial of Public Space]

The Biennial of Public Space was born in the last months of 2010, the project was carried out by the historic and prestigious National Institute of Urbanistics to achieve a common table of discussion about the meaning, construction and management of collective spaces. Its open, creative and interactive character represented a turning point in the elitist and traditionally closed management of Italian urbanistics. The hybrid and participative character of the events developed over few months and almost exclusively through the internet and social networks; exceeding the most optimistic forecasts of organisers with regards to the volume of proposals. The 3-day celebration in Rome (12th-14th May

2011) occurred in a pioneering and playful way inside the construction site of the University of Rome Three during the renovation of the ex-slaughterhouse in the old and very popular area of *Testaccio*, as a celebration and event, round tables, workshops, design exhibitions, videos, etc. The Biennial is currently organising the second Edition (17th-19th May 2013) and it is appearing on the internet with mixed modalities – properly *associative-analogical* – where the role of the *associative-digital* groups is rapidly growing thanks to social networks.

There are self-convoked groups of the so called ‘active Citizenships’ that are building social lobbies, according to a new associative phenomenon [19] focused on ‘City Making’, on a participative basis. The transformation is consolidating with the choice of opening the debate to unconventional ‘actors’, such as groups of ‘*Guerrilla Gardening*’, sociologists, artists that debate over and compare their ideas and experiences (from performance to flash mob) with traditional technical figures, such as Public Administrations and private entrepreneurs.

As a matter of fact, this ability to team up coincides with the experimentation of team telework located in different areas of the country or in a trans-national dimension. The crucial transition is kept on the efficacy of the medium and above all on the ability to overcome the communicational linguistic barrier. The construction of current ‘test cities’ was born in the creation of ‘conventional’ languages, i.e. shared elements in key words with a global and glo-cal value.

3.2 Case study b)

Information Technology in building automation (domotics) and systemic vision

The buildings that compose the modern city are places of flows, energy and matter that, using a biological metaphor, can be associated to vital fluids and to their transport of necessary substances to be absorbed or expelled by the organism: a ‘*urban metabolism*’ [20]. In the classical configuration of urban services, these flows are not associated to a piece of information, i.e. their flow is almost unconscious and without meaning to the inhabitants’ intelligences. The classical plant design paradigm that divides the connections of the building from the urban plant design in suppliers and waste connections, produces a simple binary system: *input* = to consume, *output*: to throw away. Complexity develops in the branched collection of all connections of the buildings that make up the settlement. Yet, such complexity takes on a meaning only for the plant designer and the network supplier who are in charge of connecting the boundaries of buildings. The contemporary development of innovative IT systems – their technological application in the energetic field (thermal/electric), hydraulic – and of a systemic culture able to observe the flows that are located in open places, is stimulating a perceptive reaction in inhabitants of cities. It is therefore possible to interact with these flows through new tools: energy and matter flows are loaded with information and open new connection paths among users.

Connections are not only spatial, but they stimulate time projection. The conception of an energy production plant based on local and private solar PV panels, is, in this sense, strongly representative of the intensification of space-time connections. Local production, the production of the owner of that plant, is subject to the intermittence typical of solar radiation availability. The user-producer knows that he will use less electricity in the period of maximum plant production; the excess will end up in the network connection, in an opposite way to the supply and different from dumping, namely charging other buildings in a different place. The development of home automated control systems of the so called *domotics* and its implications, were foretold and explored in a recent past, when the level of development of technological tools could be imagined but not applied systematically. These were

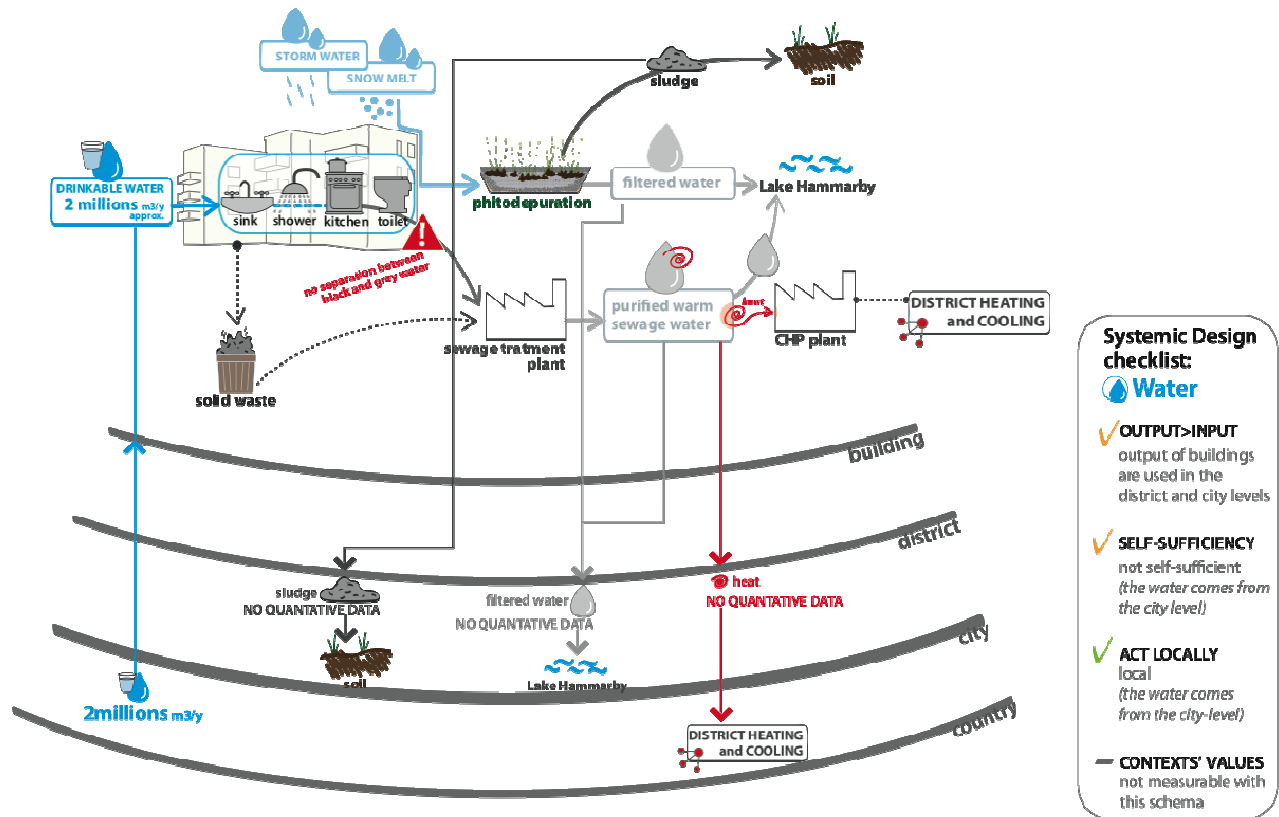
enlightened intellectual visions, but not yet able to determine significant and widespread behavioural variations. However, the ‘*domineering*’ aspect of these technologies has been often highlighted by underlying the subjection of the inhabitant to the difficulties of the *domotic system*. Recently, the diffusion of tablets and smartphones that can be easily connected to domotic switchboards is giving a boost to *domotics* and network connections. *Domotic technologies* are user friendly, i.e. reassuring and worthwhile. The ethics of this diffusion is *tenuously* ecologist, devoted to save resources and reduce waste through the re-use of dumping flows.

It is a new relationship all together, between energy flows and mass that pass through buildings, which, as mentioned before, stimulate an ‘extended sensitivity’ in the citizen. Flows, as it were, take on a meaning linked to opposed needs, to the possible reconciliation of same needs; they organise themselves in a language that is conveyed through the gauges of these flows. Their numeric values stimulate a new control on those technological elements by the inhabitant, which the construction industrialization had standardized and pushed away from the buyer during the past century.

Recently, connections between inhabitants of a building and the rest of the urban territory have been often tested to achieve a new ecological balance. Some authors dwelled a lot on coupling different levels of the city-system. For example, in the Swedish case study of *Hammarby Sjöstad* in Stockholm [21] the connection among scales clearly stands out, which is fundamental in these projects [22].

This vision is not far from the balance of some pre-industrial, agricultural, traditional settlements. The fundamental difference is in the scales of interaction, from a single building to a modern area with an elevated inhabitative density, to a city, village and more. The re-discovery of a cyclical approach is not only the result of an ecologist ethos, since *Hammarby’s* system was born to be advantageous to its own inhabitants. It is rather, a technological-cultural reconfiguration where the role of IT systems paradoxically determines the chance for people to be involved to manage a plant organization with a complex network, rather than a top-down controlled solution. A system that is articulated on more than one spatial and time scale requires the availability of mediation resources with an autonomous programmed management of artificial intelligence, to be able to work and adapt to all variations and intermittences linked to users and to natural rhythms. This practical possibility, which is more and more developed, stimulates the sensibility of inhabitant people, people that have been involved in the management of the system and are actors and proponents.

The connotation of user’s sensitiveness towards building automation (*domotics*) is the main cipher of some recent products, based on the use of economical components and on a free programming language. These are non-engineered systems sold as a rigid product, a series of technological components that allow through optimised tools to build one’s own *domotics*. These open-source electronics prototyping platforms can be connected to every type of sensor and control, useful to manage the functions of a modern building, like central heating, natural and artificial daylight, the popular systems of energy generation, each appliance and can be used for a variety of original applications and self-built ones. The World Wide Web is the natural ground where users’ communities of these economical systems, which are extremely powerful and flexible, proliferate.

Figure 2. (a) Scale connections in the *Hammarby Sjöstad* (Montrucchio, 2012)

3.3 Case study c.

An Interactive Museum on the Net [‘A come Ambiente’ (‘E for Environment’) Turin, Italy

The museum ‘A come Ambiente’ (MA) opened in Turin in 2004, thanks to the renovation and redesign plan of new spaces inside a big abandoned industrial estate. This is the first museum in Europe thoroughly dedicated to environmental themes (energy, ecology, consumerism, transports, food, just to mention some). The ideation, construction, exhibition set up and fruition stages are innovative and interesting especially from the point of view of *complexity*, *flexibility* and *multimedia management* (both in the architectonic shape and in the possible use of spaces).

The article outlines the following construction phases of the museum: the structure, the spatial organization, the fruition modalities and the internal management system. The foundation process of this structure was inspired by the convergence of different actors, who had a long experience in the event and exhibition management. The ability to pool and value existing practices was made possible thanks

to the creation of a network of diversified subjects. A big experimentation and organization baggage merged into a unique design project. The outcome was the Museum, which represents the climax of a journey divided into many stages. MA started from the development and evolution, remake and innovation of the interactive and multimedia Museum “*W for... how to know and play with Waste*” (“*R come... conoscere e giocare con i rifiuti*”); from the permanent exhibition “*H2O, know and play with Water*”; and from *Bio.net, know and play with genome*”. These were permanent, interactive, multimedia exhibitions that were very successful in the past years. MA is rooted in the popular didactic culture, which developed and became very popular in Turin, from *Ars Lab* to *Experimenta*, to popular science evenings ‘Science Thursdays’, ‘Next’, and the exhibitions in preparation of a future project of the ‘Science Center’.

Figure 3. (a,b,c) ‘*A come Ambiente*’ Museum - Turin. Exhibition Halls - Interior.



The space organization and the fruition modalities represent an example of how flexibility can become a valuable paradigm of a cognitive and experiential process. The key-word is *'adaptability'*. The structure of the building is conceived to allow varied installations and a continuous transformation of spaces: set ups can be modified as well as itineraries. The interaction between the building/set up/user is at the centre of the museum concept, elaborated by designer Prof. Arch. *Agostino Magnaghi* and by the museum director, Dr *Carlo Degiacomi*. The role of the visitor is not passive, he can intervene, touch, experiment, use the installed mechanical and multimedia devices, based on the idea of *'learning through play'*. Depending on the degrees of difficulty, time and interest, the itinerary adapts to a differentiated audience (from children to adults) and to different themes (visible in their globality inside an ongoing itinerary. It's a knowledge that can focus on the detail, on a specific theme and compare itself in a multiscalar vision (for example: from the heating system of a building to the more general theme of air pollution and vice versa).

The internal management system at *MA* is equally interesting. The building is not only an interactive, multimedia museum. It's itself an experiment and a crossbreeding. *MA* also organise events and exhibitions about current affairs offering a critical cut; connecting with education institutions, companies, agencies, associations and others interested in the environment. *MA* is a workshop and a place of simultaneous production of knowledge and materials. The interactive and multimedia set ups were conceived, designed and made ad hoc by an internal team (called *'Creative Workshop'*) composed of employees, collaborators and consultants.

3.4 Case study d.

Action, Denial, Reaction: New Boundaries of Creative Participation

The consideration of bottom-up processes in the sphere of research on new forms of interpretation and development of the urban space, concerns a vision of the city in which, through the multidisciplinary development of the enquiry, economics and human sciences are levelled to technical disciplines. The approach that derives from it, is experimental and open, characterized by methodological, instrumental and systemic aspects rather than obsolete axiomatic models with disaggregating effects on conditioned planning [23]. In particular, theoretically, new interpretative horizons come from the acknowledgement of the 'economic value' of the informal (in the global macroeconomics scale and in the local one of the perception of urban spaces, with particular attention to the so called empty and marginal) [24]. The disciplines of sociolinguistics (with an enquiry about expressive manifestations), linguistic symptomatology of the conception of space and of the relationship community-city [25] are a disciplinary field of great interest.

On the basis that, looking back and searching for the history of participative experiences, a huge bibliography comes out, which is just the tip of the iceberg of collective actions, artistic and/or social devices, spontaneous and adaptive manifestations. This is a treasure of mainly lost practices or relegated in participants' and observers' memories (more often than not absent in local administrators' memories) carried out in a technical-cultural context that, as at today, still finds it hard to acknowledge the value of symptom, sign, and suggestion to catch and develop. The experience of the artist *Riccardo Dalisi* [26] was fundamental in Italy, set in the difficult social reality of *Traiano* neighbourhood in Naples. Here, they tried to catalyse the childish creative disorder to elevate it to social game in the production of an Architecture of the Unpredictability.

This strand of enquiry found its declination in pedagogic sciences rather than in urban planning, elaborating in 1991 the *'Charter of Educating Cities'* in Barcelona [27]. On the architectonic and urban plan, actions were limited to the ephemeral, to street art and graffiti. This reality reveals a design perspective geared to the control of processes rather than to coaction; in a cultural scenery where the crossbreeding device proceeds from a centralistic vision. The partial handover of power is necessary to involve the informal productive processes of architecture and design (Kiesler, Novak).

The debate over urban *performative* creativity made a comeback at the end of the 20th century, with the crisis of the consumerist-capitalistic model and the research for new sustainability policies. In the social sphere, the value of place identity asserted itself, also in a promotional key, as a substructure of self-identity, characterised by cognition, memories, affection clusters concerning tried out places. It is conceived like an active personal construction, stemming from the direct experience of the physical environment and endowed with *"structural properties that dynamically vary in relation to the social identity and to the lifestyle of individuals"* [28].

The European and Mediterranean city – with its complex system of relations and disarticulations, between historic-traditional values and property speculation – is the experimentation field of this new season of the experimental participative approach. Apulia is one of the Italian regions that are more active in this context, where the youth initiative for the design of confrontation places in cities has been funded for many years, with experimentations of new economical and research models. A lot of these projects concern the urban space in its most disparate declinations.

A relevant case study is the city of Taranto, characterised by an exaggerated polarization of the territory due to the presence of heavy industry and strategic military structures. The effects produced by the speculative and uncultivated declination of urban trends (renewals and gentrification of city centres, creation of satellite suburbs, development of metropolitan linear areas, fiscal zoning) have conformed a municipal territory marked by deteriorated areas with high rates of criminality, opposed to anonymous or dormitory suburbs.

In the city centre, a group of designers and cultural operators started up an *Urban Center*, the *'Mag-gese site'* in 2006, in a neighbourhood marked by abandonment and under age illiteracy. The intent was to create a cultural exchange centre, utilizing the disused public property asset. In 2008, the cinematographic medium became the opportunity to open the debate over the future vision of the neighbourhood. In 2009-2010 three initiatives funded by the Region [29] promoted practices of material and linguistic redefinition of some spaces by involving the population in the design stage and introducing sustainable construction techniques (raw soil, recyclable materials). In 2011, a project to start up unemployed residents to artisanal production and to building sites (National Operative Plan, Safety for the Development, objective, convergence 2007-2013) [30]. All the activities were promoted and discussed and documented, as a testimonial of the transformation of participative moments in actions of involvement and interpretation of the space.

An emblematic comparison is the one between Taranto for which *'Landscape Choreography: from Waste Lands To Shared Urban Gardens'* was formulated, approved and funded by the Culture Programme 2007-2013 [3] and the Ex-Fadda at San Vito dei Normanni (Brindisi) [32]. The first one is a project that proposes the planting of allotments in four urban realities: Taranto (Italy), Cluj Napoca (Romania), Cottbus (Germany), Lodz (Poland) to develop participative and artistic production processes in an urban emptiness. The second one is an urban workshop carried out by a community of creatives and volunteers, partly funded by Apulia Region, who are transforming the spaces of the ex-

oenological plant '*Dentice di Frasso*' into a cultural space assisting the territory. In the first case, from the European scale to the local one, the municipality is running the risk to lose the funding because of the difficulty, more political than economical, to start up an official partnership. In the second case, from the local scale to the transnational one, the acquired awareness of the economic-social value by local administrators is such to overcome the context of the borough council and involve European stakeholders' networks.

Figure 4. (a) *Ex-Fadda*, Urban Center, San Vito dei Normanni (Brindisi, Italy): Interiors during the renewal stage. (b) Working with the population and disabled people. (c) *Cantiere Maggese* Urban Center, (Taranto-Italy) benches and plant rack made with the population. (d) A moment of participation.



All these experiences, compared to a general context, refer to a 'lateral' approach, freed by the will of control of processes. This approach promotes the free exercise of creativity. The aim is to recover more intense and efficient practices of interaction with the urban space. The scenario is more similar to the spontaneous city, which is generating new urban models in South American suburbs [33].

The methodology is 'collective-connective', oriented to co-action among peers, typical of web platforms; conscious of the balance of forces internal to individuals, social and community fabrics. The creative process could be defined 'Postdesign', intended as the product rich in suggestions and emotional power, able to involve participants and observers cancelling the distance between the manufac-

tured product and the artistic dimension of design. The process exploits the potentiality of connective-collective participated actions to re-establish the historic continuity in neighbourhoods marked by functional decay, through the capability of ‘mnemonic gluing’ to integrate the connective, historic tissue of spaces that are no longer adjoining [34]. The challenge is the transfer of informal participative processes on the plane of permanent construction of urban space. This allows to overcome the mystification of fictitious openings and social partnerships, which hide a short-term centralistic and disorganized planning.

4. Conclusion

The question of democratic discussion on the future of cities and territories boosts institutional and disciplinary systems that rule over them. Whilst, bottom-up actions confirm the primary will of creating sustainable processes in a socio-environmental scope, prior to any technological processes [12]. The historic town and pre-industrial settlements represent an experiential tank, a set of millenary practices that are still able to become a ‘collective mind’ among groups in order to exchange and work-out innovative solutions through sharing and comparative study.

Conflict of Interest

The authors declare no conflict of interest.

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