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Complexity as a Narrative

Giacomo Pala
Universitat Innsbruck, giacomo_pala@libero.it

Complexity as a Narrative: Architecture and Chaos

Giacomo Pala – Universitat Innsbruck

Abstract: In this paper an attempt is made to discuss how the computer has imposed new conventions to architecture over the last thirty years. The paper's aim, is to discuss how the introduction of digital media has forced architecture to find ways to deal with new technologies and to develop new disciplinary meanings. First, the paper addresses the question of complexity and chaos in the postmodern discussion by the reading of Lyotard's theories. Therefore, the essay pinpoints attempts of developing new conceptions of "complexity" in architecture derived from the post-modern sciences of indetermination. Interengsly enough, this was doable because both these kind of sciences and the architecture using these concepts were/are based on the adoption of digital technologies. Consequently, a number of scientific and architectural projects are discussed. Then, complexity is discussed as a design method allowing the embodiment of scientific concepts in architecture. Still, it is noted that these architectures are not scientific objects, but are more poetic reflections based on scientific concepts. This leads the paper to investigate the possibility of Architecture to use science as a narrative. Such a possibility is spotted in the texts of the same architects discussed before showing how a project can embody cultural values. A number of specific studies (such as James Gleick, Lyotard, Charles Jencks, Gilles Deleuze and Sanford Kwinter as well as others) are then introduced in order to verify these connections. Finally, a number of questions are introduced in relation to the present condition of architecture in order to verify if and how these kinds of experimentations are still actual.

Keywords: *Complexity, Metaphor, Science, Hermeneutics*

1: Post-Modernity and Complexity

"Postmodern science – by concerning itself with such things as undecidables, the limits of precise control, conflicts characterized by incomplete information, "fracta", catastrophes, and pragmatic paradoxes – is theorizing its own evolution as discontinuous, catastrophic, non-rectifiable, and paradoxical. It is changing the meaning of the word *knowledge*, while expressing how such a change can take place. It is producing not the known but the unknown." [1]

With these famous words written in 1979, Jean-François Lyotard describes the impact on our society of the latest developments of science at the end of the XXth century. What emerges very clearly in this paragraph taken from often misunderstood "Post-Modern condition", is the French philosopher's interest for the understanding of the epistemology of knowledge. Of course, Lyotard's concerns are more than justified. In fact, in the same period in which he is writing his seminal book, new technologies are affecting the development of all society and changing disciplines including, but not limited to, physics, engineering and biology.

1 Jean-François Lyotard (translated by Geoff Bennington and Brian Massumi), the Post-Modern condition: a Report on Knowledge, (Manchester: Manchester University Press, 1984) p.60

Indeed, what Lyotard starts to analyze in his pivotal book is the influence of information technology on society. These are technologies that, like a violent virus, have started to infect the world since the rising of the industrial (and then post-industrial) modernity and that at the end of the last century have even started to change the subject's perception of reality. What is particularly interesting in Lyotard's analysis is his choice of picking up the sciences of chaos and indeterminacy as examples for the description of this cultural shift. The reasons for him to do so are of course multiple, and it would not make any sense to discuss all of them in this context (such as the debate between Lyotard and Habermas about the legitimation of knowledge)[2]. Nonetheless, one of these reasons is particularly interesting for the final aim of this essay. Indeed, according to Lyotard, these sciences seem to be deeply influenced (if not even created) by the development of information technology and by the introduction of the computers in the scientific research.

Lyotard's post-modern sciences can be inscribed in the so-called paradigm of "complexity science" or "chaos theory". This kind of science, described by James Gleick in 1988 as one "of the global nature of systems", has to be considered, according to the same author, as an emerging discipline that has created its "own tradition of using the computer as an experimental tool"[3]. This words are particularly interesting because they give us the first critical axiom through which we can look at this kind of science: the development of this scientific research program is directly related to the introduction and development of information technology. In other words, through the invention and development of this paradigm, science has started the development of new methodologies in order to deal with the problematic given by the introduction of new tools, instruments and media. Of course, this science is not just about that, and (as everything in our cultural world) the theories of complexity have a past of precedents such as the researches of scientists like Henri Poincaré, D'Arcy Wentworth Thompson or even in theories of intellectuals such as Goethe.[4] Nonetheless, it is thanks to the introduction of the computer and its computational power that this science has seen its real development. In fact, in order to develop their researches, the scientists who study the complexity of the world adopt digital media as tools enabling the simulation of the processes of transformation of the physical entities. Simplifying, complexity can be described as the characteristic of complex systems, meaning those kind of systems - such as the climate - of which it is extraordinarily complex (if not impossible) to foresee the behavior. For instance, it is thanks to the possibilities given by computation that scientists have been able to study physical phenomenon such as "emergence" or "swarm systems", meaning the non-deterministic behaviors happening in nature. It must be noted that if these complex systems are characterized by an evolutionary behavior that cannot be predicted or guided, their simulations remain somehow deterministic: those cannot be based on an indeterminate number of variables. Nevertheless, even though the models used to describe Nature's complexity cannot be considered as purely

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2 Lyotard is very explicit in the introduction of "the Postmodern Condition": "Is legitimacy to be found in consensus obtained through discussion, as J ü rgen Habermas thinks? Such consensus does violence to the heterogeneity of language games. And invention is always born of dissension. Postmodern knowledge is not simply a tool of the authorities; it refines our sensitivity to differences and reinforces our ability to tolerate the incommensurable. Its principle is not the expert's homology, but the inventor's paralogy." Idem, p.XXV

3 James Gleick, Chaos: Making a New Science, (New York: Viking Books, 1987) p.56

4for a longer discussion of this topic see: Gleick, (1985). Particularly the chapter "the Experimenter". pp.189-212 complex and chaotic, as Ilya Prigogine has noticed, these "are nonetheless useful. Thus the distinction that has been founded on the idea of complexity seems less clearcut at present than it did in the past.[5]"

Indeed, thanks to the work of mathematicians, physicists, chemists and biologists who were seeking trans-disciplinary connections between different kinds of unpredictability, it was found a surprising chaotic order in all of nature. For instance, Ecologists started to explore the composition of populations as complex systems, scientists such as Luigi Luca Cavalli-Sforza melted evolutionary theory and genetics, discovering (as well as inventing) a non-linear structure behind the mystery of evolution[6]. Even economists tried new kind of analysis in the attempt of predicting the future variations of the stock market. Finally, using Peter Coveney's and Roger Highfield's words (respectively the director of the Centre for Computational Science at UCL, London and a science journalist), complexity is a "watchword for a new way of thinking about the collective behavior of many basic but interacting units, be they atoms, molecules, neurons or bits within a computer[7]."

Going back to Lyotard's use of this science to exemplify post-modern culture, it is now quite obvious the reason why he decides to pick it in order to describe the "postmodern paradigm". This science represents a change in the way humanity looks at the world. These sciences are comparable to an avant-garde gesture (no surprise about Lyotard's interest in Dadaism[8]) that is coherent Lyotard's definition of post-modernity: the modern paradigm taken to its extreme[9]. Thus, these theories of complexity are fundamental in order to understand the role of new media and new ideas in the evolution of our culture, the arts and – ultimately - late-capitalism. If the sciences are probably the most impressive example of the huge impact of information technology on our culture, how does the computer have influenced other cultural disciplines?

One of the greatest examples, alongside science, is architecture, mainly for three reasons. The first one has a rhetorical nature: as well known, before Lyotard used the term post-modern, this word was for the first time used (at least in its contemporary meaning) by the architecture historian Charles Jencks to describe the architectural tendencies after the fall in disgrace of modernist arts.[10] The second reason is related to the nature of architecture: a cultural discipline that has both a technical content and a humanist one. The third one, which in this context is the most relevant, is related to the theories of complexity. Indeed, architects, in order to produce a meaning for the shapes that the computer was for the first time allowing them to produce, used concepts from the same sciences used by Lyotard to describe the "post-modern condition" in order to overcome the post-modernist architectural styles: a typical postmodern loop. This reason is particularly interesting because, as noticed by Antoine Picon, this cultural operation has been possible thanks to the

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5Ilya Prigogine, "the Laws of Chaos", in Review (Fernand Braudel Center), Vol. 19, No. 1 (Winter, 1996), p.3

6see: Luigi Luca Cavalli-Sforza, Paolo Menozzi, Alberto Piazza, "Demic expansions and human evolution." In *Science* 1993; Vol. 259, issue 5095, American Association for the Advancement of Science, pp.639-46

7Peter Coveney and Roger Highfield, Frontiers of Complexity: The Search for Order in a Chaotic World, (London: Faber and Faber, 1995) p.7

8see: Jean-François Lyotard, Les Transformateurs Duchamp (Paris: Galilée, 1975)

9Indeed, Lyotard's idea of postmodernity was much more modernist than how it is usually described. See Jean-François Lyotard, *Re-Writing Modernity*, SubStance Vol. 16, No. 3, Issue 54 (1987), pp. 3-9.

10Actually, the term post-modern had already been used in the late XIXth century and in the XXth century by the critics John Watkins Chapman or J.M. Thompson, but it referred to particular artistic exprtessions.

“similarities between the operations upon which science and architecture are based”[11]. In other words, as science had been able to find new disciplinary means for the introduction of information technology in its research methodologies, so architecture had to find new meanings for the development of a new design epistemology that was for the first time emerging thanks to the introduction of the computer. Moreover, since both science and architecture deal with creative principles allowing the exchange between reality (experimental and built) and theory, thanks to the computer – a medium shared by both these disciplines – it has been possible a fruitful exchange of images, ideas, theories and axioms; at least in their symbolic dimension.

2: Complexity as a Metaphor

A well-known example of this exchange is the “Blob” architecture developed in the nineties. This kind of architecture is based on the adoption of topological complex geometries: forms not depending upon measurements, but defined by deformations. Blob architecture (acronym of “Binary Large Object”) has been extremely successful because of its typical shape: a kind of fluid object that, instead of recalling the meaning hidden in its name, seems to recall the “blob” represented in 1958 by Irvin Yeaworth in his famous movie. A classic example of this kind of architecture is Greg Lynn’s “Embryological House”. Through this project, Lynn moves the notion of composition from the modernist/classical idea of a form made of modules to a form based on the iteration of shapes. In order to design this project, Lynn first launched the parameters for the generation of the shapes establishing prescribed limits. Consequently, he produced the smoothly rendered surfaces that characterize this project. Interengsly enough, Lynn decided to produce not just one final project, but a series of models as to suggest the infinite potential of an iterative, non-linear and virtual design.

Another well-known example of this kind of new architecture of “complexity” is the so-called “folding”: a technique that produces a geometric and formal multiplicity by literally folding surfaces and volumes one on the other. Moreover, the folding, a concept inspired by Gilles Deleuze’s philosophy, has to be understood as an attempt of subverting the dichotomy of interior/exterior typical of any building, by the design of projects in which space is continuous and formally complex.

11Antoine Picon, “Architecture, Science, Technology, and the Virtual Realm”, in Antoine Picon, Alessandra Ponte, *Architecture and the Sciences: Exchanging Metaphors*, (New York: Princeton Architectural Press, 2003) p.294

Fig.1. an example of Folding architecture: Peter Eisenman's Busshelter in Aachen, 1996 (author: Brbbl)

It actually must be pointed out that this general interest in "flows, intensities, and the processes operating beneath or beyond things than in the things themselves" that, according to Todd Gannon, are imbued of Deleuzian theories, are based on metaphorical interpretations of Deleuze's ideas[12]. Indeed, Deleuze's main objective is to study Leibniz's definition of calculus, Baroque culture, Alfred North Whitehead's mathematics and philosophy in order to entrench the actuality of his own time in a theoretical and historical description: a research's aim that is way more ambitious than just inspire new shapes. Nonetheless, it is quite clear that when the idea of the Fold is defined by his same author as the property that "can be recognized first of all in the textile model of the kind implied by garments: fabric of clothing has to free its own folds from its usual subordination to the finite body it covers[13]", it gets really easy to transform these images in architectural imaginary. Even more so when Deleuze writes that "Baroque architecture can be

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12Todd Gannon, Graham Harman, David Ruy and Tom Wiscombe, "The Object Turn: A Conversation", in Log 33: Observations of architecture and the contemporary city, New York, Anyone Corporation (Winter 2015), p.73

13 Gilles Deleuze, The Fold: Leibniz and the Baroque. Trans. Tom Conley. (Minneapolis: University of Minnesota Press, 1993) p.121

defined by this severing of the facade from the inside, of the interior from the exterior, and the autonomy of the interior from the independence of the exterior, but in such conditions that each of the two terms thrusts the other forward[14]." It is not surprising, then, to read the following words written by Peter Eisenman: "folding changes the traditional space of vision. That is, it can be considered to be effective; it functions, it shelters, it is meaningful, it frames, it is aesthetic" [15].

Leaving for the moment aside the new procedural techniques provided by the computer (the same Deleuze provided images such as the "Rhizome" and the "monad science" that, referring to Chaos theory, offered some interesting ideas in relation to the idea of the "flow"), the reasons for the interest in these new formal possibilities are of course many. First of all, for the sake of experimentation with the new digital tools. Secondly, and more importantly, because of the theoretical and disciplinary drawback that is implicit in their adoption. In fact, if there is a word referring to a concept that can contribute in the definition post-modern culture, this is "complexity". Even in architectural terms, this word has had a huge impact in the disciplinary debate, at least since the sixties. Since this decade, architects and theorists have in-fact started to publish texts and to design projects that undermined modernist orthodoxy and homogeneity in favor of paradoxes and incongruences. Among these stands Robert Venturi's book "Complexity and Contradictions in Architecture" that, as suggested by its title, fosters an architecture that ironically embodies multiple meanings. Moreover, in the eighties, when "deconstructivism" showed up, architecture took to the limit the notion of complexity by purposing a design that was as libertarian and dynamic as it was fragmented and patchy. Consequently, architects such as Zaha Hadid (in her early work), or Bernard Tschumi, designed projects that had to be shocking and subversive. Given this – really brief - history, many architects in the nineties saw in the application of the computer as a design tool the possibility of reconcile the opposing goals of contradiction and unity in a new kind of meta-modern architecture made of multiplicities. It is precisely in this context that the post-modern sciences have probably had their biggest impact in the discipline of architecture, due to the possibility of translating trans-disciplinary concepts in architectural terms. In other words, at the end of the last century, as scientists found ways of using digital media, so did architects using these tools and the imaginary related to them in order to define a new disciplinary agenda.

More specifically, given the history of "complexity" in the architectural debate, it is this term (and its conceptual content) that has been strongly adopted by the young architects, theorists and critics in the nineties. Indeed, if modern science was founded on the conviction that the universe was a solid, deterministic and clockwork system that runs according to a relatively small number of laws, the post-modern and contemporary sciences depict a world in which space and time are relative to the observer, in which certain physical properties exist only if measured and in which the behavior of both matter and energy can only be explained on the atomic and subatomic levels. Moreover, in this brand new world, natural systems are nonlinear and dynamic, moments of equilibrium are just relative to a particular point in time and chaos governs the behavior of ecosystems that are – at least partially – self-organized. As written by the scientist Peter T. Saunders, this new view of the world "does not, as do relativity and quantum mechanics, introduce entirely new scientific principles, but it can completely alter the direction of our

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14Gilles Deleuze, The Fold: Leibniz and the Baroque. Trans. Tom Conley. (Minneapolis: University of Minnesota Press, 1993) p.28

15Peter Eisenman, "Visions Unfolding. Architecture in the Age of Electronic Media", Domus 734, January 1992, p.20

research all the same" [16]. For architects all over the world, the possibility of producing this new unstable complexity and applying new geometries and procedures in the design process has meant exactly what Saunders is saying: the development of a new research program and the naive hope for the invention of a new architectural paradigm. A hope summarized by Charles Jencks in 1997 when he writes: "Nonlinear Architecture will prosper as a major movement into the millennium, fed by the new sciences of complexity"[17].

3: Complexity as a method

Admittedly, for the understanding of the scientific meaning of "complexity", it is necessary to study all of the processes that generate such a condition. So much so that this aspect was even already clear in the minds of the already mentioned precursors of these sciences. For instance, Goethe had already defined in 1790 the process that governs the transformation of the leaves in a plant's life as *Metamorphose* (metamorphosis) [18]. In 1917, D'Arcy Wentworth Thompson had already imagined a system of forces as the main cause for the formal transformations happening in nature[19]. Nonetheless, it is thanks to the introduction of digital media and thanks to development of biology, genetics and evolution theory that science has started to study the natural world as a constantly mutable reality that is adapting to always changing conditions. Consequently, the natural world has started to be studied not anymore as a linear and maybe "sublime" system, but as a product of different non-deterministic processes.

16 Peter T Saunders, "Nonlinearity, what it is and why it Matters", in p.115 in Giuseppa di Cristina (edited by), Architecture and Science, (London: John Wiley & Sons, 2001) p.115

17 Charles Jencks, "Nonlinear Architecture: New Science _ New Architecture", in Charles Jencks (edited by), New Science = New Architecture, AD Profile 129, AD 67 September-October 1997 (London: John Wiley & Sons Ltd., 1997) p.8

18see: Johann Wolfgang von Goethe, *"Versuch die Metamorphose der Pflanzen zu erklären"*, (Germany: 1790)

19see: D'Arcy Wentworth Thompson, On Growth and Form, (United Kingdom: Cambridge University Press, 1917)

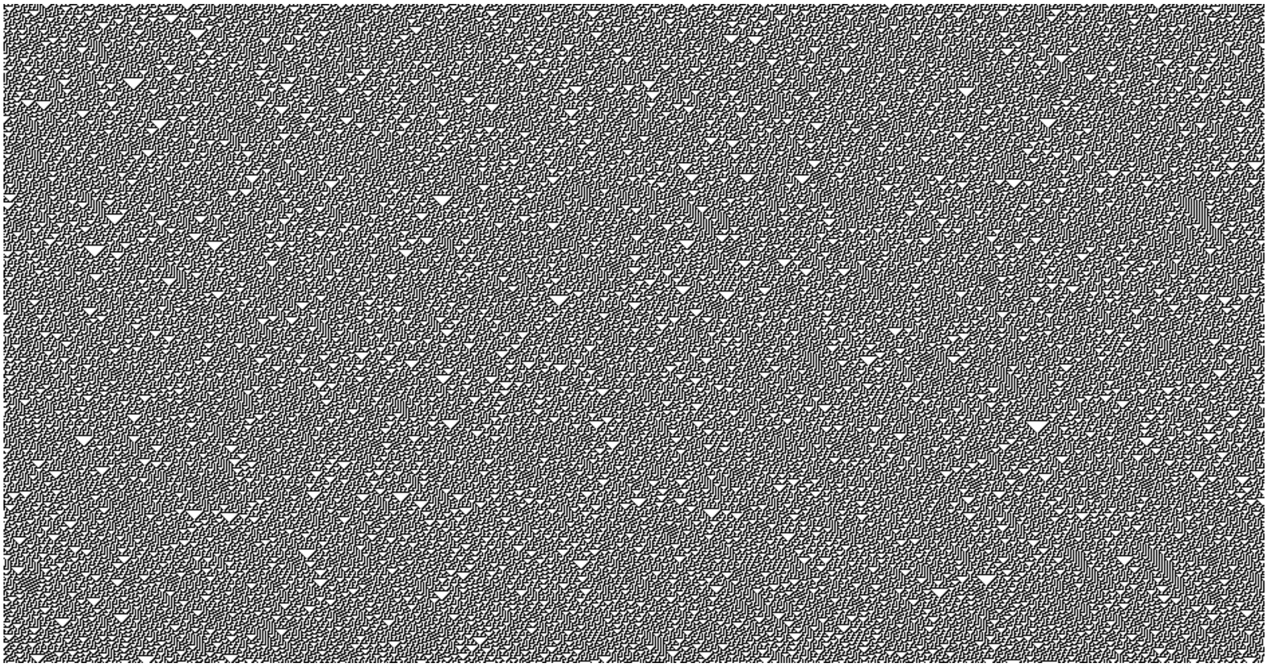

Fig.2. Stephen Wolfram, Cellular Automata, (Detail)

Thus, if nature can be understood by the application of calculus and the same algorithm can be applied in the design of a building, for many architects, to apply these processes for architectural design has seemed the most natural consequence. Since then, the world of architecture has seen "swarm architectures" and "emergent systems" applied in the design of a building's shape and complex non-linear patterns applied in urban design. Nonetheless, it is necessary not to misunderstand the role of the application of these processes in architectural design. What the architects are in these cases applying is not a "magic tool" allowing them to generate the voluptuous shapes of nature. In-fact, these processes, as stated by Prigogine, are already a simplification of the real complexity of nature. Then, the architectural application of these processes is a schematic – and, at the end of the day, deterministic - application of these processes. Still, it is anyway possible to understand these processes from a disciplinary point of view. As already written by Sanford Kwinter, these kinds of processes have in-fact to be read as a kind of formalism:

"formalism demonstrates first and foremost that form is resonance and expression of embedded forces. […] The dynamic relation between these two levels of form is the space where indeterminacy or historical becoming unfolds. Extended or true formalisms are different only in that they also describe relations of resonance and expression between local forms or form system.[20]"

20Sanford Kwinter, "Who's Afraid of Formalism?" (2004), in Sanford Kwinter, Far from Equilibrium, essays on technology and Design Culture, (Barcelona: Actar, 2008), p.147

These procedures are therefore particularly interesting because they are design tools and techniques permitting the development of a specific thinking mode for the generation of a project, allowing the incorporation of dynamic concepts within morphological processes based on “bottom-up” aggregation of elements. From a formalist point of view, another potential given by algorithmic procedures within architectural design is the exploitation of those who are defined as parametric relationships. One type of procedure that allows the incorporation of parameters within the design process that can be used as variables giving the designer the possibility of working on continuously adaptable shapes. Using Patrik Schumacher’s words, in parametric design the task is to “combine design progress with the preservation of reversibility”.[21] These correlations between different inputs are therefore open to the introduction of new variables that can be simulated in real time, allowing the generation of results increasingly chaotic and complex. Let’s take “Parametricism” as a study case. This is a style supposed to stem from the application of computational processes and that is generated by means of scripting languages (MEL, Python, Java, Visual Basic, etc.). A style that, according to his ideologue, can be defined as such because it allows the formalization of Nature’s complexity in architecture through the adoption of the most advanced technologies: a form that rather than being created, is “found.”

Of course, the application of digital technology and its computational power in architecture has a further potential: these technologies also allow architects to transform the problem of architectural composition in an optimization problem to be solved thanks to the application of algorithmic processes. Theoretically, thanks to computation, the “creative” problem can be solved (or rather avoided) by the adoption of a defined number of determined steps: a method that can be useful for the reduction of the arbitrariness in the definition of a building’s shape and structure.

Parametric and optimization procedures can generate, in fact, a formal complexity thanks to a process often referred to as “phylogenetic” and that is able by itself to select and recombine the best solutions in order to get the best result for the specific conditions used as inputs. Leaving (for the moment) aside the narrative aspect of the use of the scientific imagery through the adoption of terms such as “autopoietic” or “self-organization”, these techniques show how it exists the tendency to transform architectural design in a mathematically determined “problem solving strategy”: a process that ultimately tends to justify the generation of form through the application of logic. It should however be noticed that the parametric and computational procedures such as “form-finding” are only for specific and relative design problems.

Moreover, since there is no optimal solution (neither any absolute truth) in architectural design, there will (hopefully) always be a certain degree of arbitrariness. Nonetheless, form-finding and the application of computational procedures have an additional and extraordinary important reason that justifies their application and their success: one that is related to the material reality of architecture. In fact, it is now possible to use computation for the construction and for prototyping elements thanks to the technological developments of the last two decades.

If we take the idea of "New Materialism", a concept introduced by Manuel DeLanda that is (once again) inspired by Deleuze’s theories as well as Alfred Northon Williams’ mathematics, we discover a different

21 Patrik Schumacher, the Autopoiesis of Architecture, John Wiley and Sons, Londra, 2011, p.358

dimension of the idea of matter from the more "classical" one[22]. Indeed, in this reading of matter, every state of equilibrium is nothing but a relative moment within a dynamic system. According to the architectural interpretation of “new materialism”, then, the matter of a building is no longer stable, but - on the contrary - it becomes a kind of matter deploying morphological potential. Of course, “new materialism” is doable thanks to the computerization of industrial technology that, since the end of the last century, has started to change the structure of industrial production. In few words, technologies such as prototyping and robotics give today the possibility of producing modules that are one different from the other, as well as using the materials’ characteristics to inform the generation of a project, as well exemplified by the researches of architects such as Achim Menges (University of Stuttgart) or Gramazio & Kohler (ETH).

In brief, the impact of new technologies in architecture is quite obvious: it has created a new language for architecture, giving metaphors and methodologies for architectural design. Still, since any language needs a narrative to be communicated, it is necessary to understand how the “scientific metaphor” influences the development of this particular language.

4: Complexity as a Narrative

Given the possibility of using the natural world as a reference, a lot of architects have used the suggestions derived from the study and analysis of natural phenomena. These designers simulate “emergent” processes and reproduce computationally natural systems such as “swarm intelligence”, obtaining a specific formalism. Today, for example, Alisa Andrasek, or Roland Snooks and Robert Stuart-Smith of Kokuggia often reference their work to the complex processes that occur in nature. For example; for their competition project for the National Museum of China, Kokkugia used the simulation of “swarm-system” (such as the one that characterizes cloud formations) in order to generate their building’s shapes. This project is defined by a whole number of elements that, like a flock of birds, delineate the final form of the building. Interengsly enough, Roland Snooks states that, although the process simulates natural phenomena, for the success of such a kind of design methodology, it is necessary to use both Top-Down and Bottom-Up strategies, because “The former strategy enables the negotiation of complex architectural problems that relate to the organization of structure, program, form and ornament. The latter is concerned with mining the generative potential of systems of formation in search of novel organizational and formal traits.”[23]

Thanks to Snooks’ words, it is clear that the use of the procedures inspired by science does not simply mean to copy nature, it means instead to translate the processes occurring in the natural world in disciplinary terms. In other words, it means that it is necessary to give a disciplinary meaning to the complex computational processes as applied in architecture. The real architectural content, therefore, is not nature in itself, but the processes by which the projects are generated.

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22 see: Manuel DeLanda, *A Thousand Years of Nonlinear History*, (New York: Zone Books/Swerve Editions, 1997)

23 Roland Snooks, “Volatile Formations”, in Log: *Reclaimin Resi[lience]stance*, New York, Anyone Corporation (Summer 2012) p.60

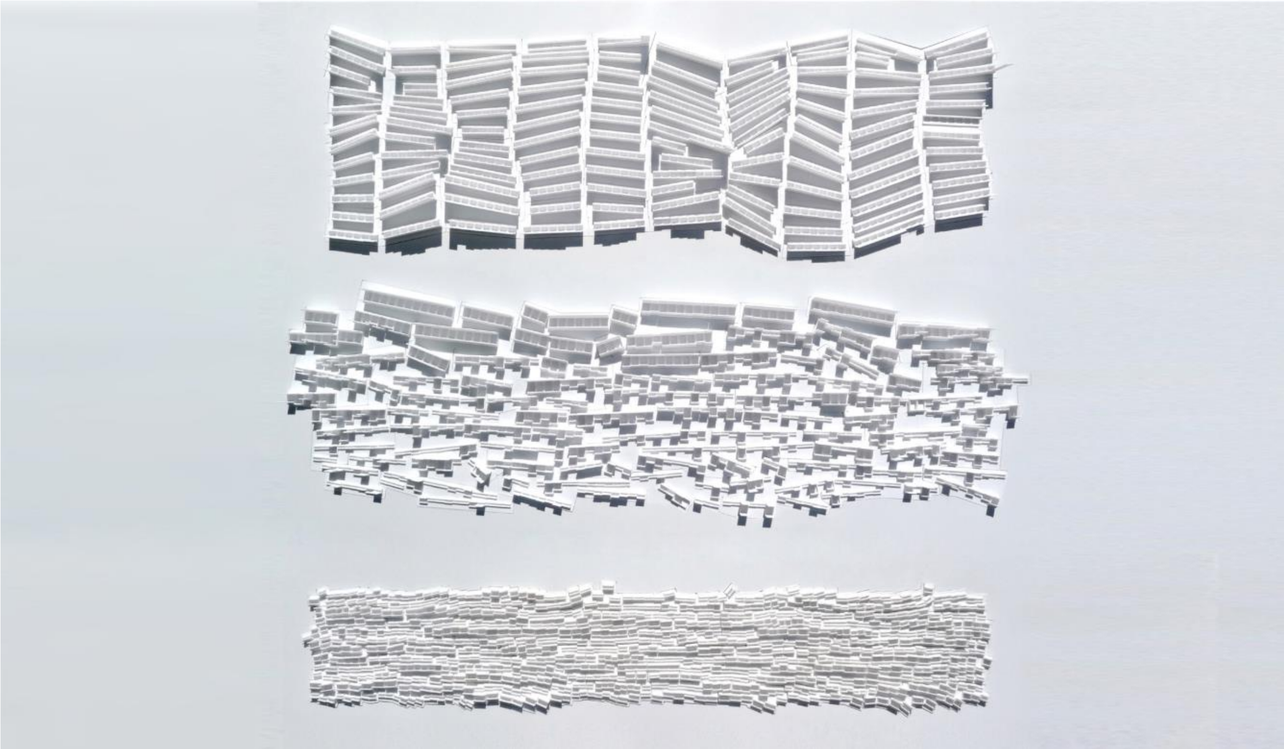

Fig.3. Daniel Köhler, the Mereological City

Fig.4. Gilles Retsin Architecture, Blokhut, Wetteren, Belgium, 2015, Model

Nature ultimately is what gives a narrative to this kind of architecture. If we considered only the process as a "thing in itself", we would find ourselves in front a strictly formal principle concerning issues such as the "part to whole" problem, as demonstrated by the work of young architects and researchers such as Gilles Retsin or Daniel Köhler.[24] Nonetheless, it must be admitted that, thanks to the "naturalist" narrative, this architecture acquires another conceptual dimension. The use of scientific imagery provides the tools for turning these prescriptions in meta-prescriptions, thus offering a narrative form that increases the symbolic value of this architecture. Forms such as fractals, or the results of computational techniques such as swarm intelligence systems, indicate then a symbolism that is inherent in their figures and in which the symbolic referent is behind the architectural forms and remains one of the signifiers of this aesthetic. In conclusion, science and nature are therefore symbols that, being references essentially external to the discipline of architecture, bring out a heteromorphic meaning for architecture.

Given the presence of the scientific theories of Chaos, indeterminacy, flows and complexity in the porst-modern culture, it might be easy to conclude that these experiences ultimately are post-modern. Nonetheless, such assumption would be dramatically simplistic because, in disciplinary terms, the term "post-modern" refers to specific architectural experiences. In-fact, if we take the discipline of architecture as a serious matter, the experiences until now described are of course different in both their ontological and epistemological definition from the postmodernism (or Po-Mo) of Leon Krier, Robert Stern and Aldo Rossi as well as from deconstructivism (whether or not this word implies a style that is related to post-modern culture is another kind of discussion). Nonetheless, it must be acknowledged how all of these theories refer to the post-modern debate. Maybe, then, we should look at this issue from another point of view. Rather than affirming that this kind of architecture is "something" or "something else", we should look back at the post-modern theory, re-reading it and re-writing it. Doing so, we might find new meanings and contents. Finally, this kind of operation might enable a new analysis of the contemporary status of architecture in its actuality avoiding the neo-modernist, rhetorical and ultimately positivistic path that "digital" architecture seems to be taking.

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24 see: Gilles Retsin, . "Something Else, Something Raw", in Matias Del Campo (edited by), *Evoking Through Design: Contemporary Moods in Architectur*e, AD profile 86, Issue 6, London, John Wiley & Sons Ltd, Novembre/Dicembre 2016 pp.84-89 and Daniel Köhler, *The Merological City, A reading of the works of Ludwig Hilberseimer*, (Bielefeld: Transcript Verlag, 2016)

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