(R)EVOLUTIONary PROTOCOLS

Interview by Davide del Giudice - City Vision Magazine issue 6 - June 2012
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I'm interested in your architecture, especially where the individual parts are no longer recognizable, no longer allowing for a differentiation between structure, membrane, skin, an architecture like a sensitive creature with relations to external and internal agents (chemical, bacteria, climate...).The interfaces between architecture, neurobiology and mathematics are modern territories of exploration and the negotiation (robotic behavior, computation protocols, chemical bio-polymer...), they become the substrate of your aesthetic. Designers have a long history on borrowing tools and techniques from other disciplines, they visualize a specific futuristic scenario and aim to approach it through the help of technology and the collaboration with scientists.
How do you use this revolutionary appropriation in your practice and research?
We try to conceive every project (to metabolize, not to create), as a system involved into the inCORPOration of its parts, thinking with morphology, matter and technology. Often is just the curiosity about particular technologies or materials that suggests a research path that materialize itself into an architecture.
Recent biotechnological scenarios are opening interesting perspectives in architecture, it is a real cultural leap, to which we have to prepare ourselves. As architects we feel the responsability to carry possible scenarios of development.
We feel ourselves close to this vision of sensitive architecture, a system able to respond to external stimuli, a system that mutates, that modifies itself, that interacts with the space and the surrounding environment. The architectural object it's used, consumed, transformed by climatic, organic and social agents; often we see buildings decaying in a passive way, we try rather then thinking about the architecture as a freezing of a shape in a particular moment, to think about materials that can grow, regenerate themselves, transform themselves: we want that the building consumes itself, it must be a part of a metabolic process.

The robots are a part of our cultural landscape. Using a robot to build, repair or modify a building, it's not a fantasy of a passionate of sci-fi, it is a political intention, an innovation will, to have an actual benefit as human beings. We are certainly fascinated by the technical complexity that comes with its design, but the focusing concept is the embodyment of robots in the design process and the architecture itself, in different forms and ways. Speaking concretely, in the industrial reality of everyday life, we relate with the manufacture of CNC components, with the creation and implementation, therefore, of parts of the project ready for the assembly, robotics is involved in maintenance or simply in the life of the building. Next step will be to design "biological system of work", biological robot (robota, "forced labor"), considering the architecture itself as robot that self-repair, that has a life cycle.

In a contemporary society, where technology allows you to more easily establish relationships with experts from the other side of the world, the only brake is our current physicality. We want to take advantage of the opportunities that technology makes available to us, it would be anachronistic to avoid it, the impetus to collaboration is inherent in the historical moment in which we live, is a natural consequence, is an emergent behavior. We still have to adapt properly.
All this allows us to construct an architectural project as a collaboration between experts of different disciplines, often seemingly unrelated or irreconcilable, towards a synthesis of knowledge and the dissolution of pure discipline.
A cannibalization of knowledge, training us in collecting, combining and transforming: taking so-

mething existing and set up the logic of change and explore opportunities in the creation of the Other.

Our interest is never focused on technique or in a veneration of scripting, instead our focus has been on methodologies that generate complex systems and emergent outcomes. Seems evident that in recent years an obsession with parametric tools has born, although there keeps on being a misunderstanding of the terms generative, parametric, algorithmic, computational and scripting. I consider parametric and emergent as polar opposites. Within parametric hierarchical tools all possibility is given within the starting condition, while emergent conditions arise from non-linear systems such as multi-agent models. Algorithms often work in a deterministic way, where there is a linear relationship between the input and output and often this does not have the sophistication to enable you to embed any architectural concern within the process.
My interest in your work is related to the intention of the designer and how it is embedded in the procedural or algorithmic process and how this intent self-organizes as opposed to simply critiquing the output of these processes. In my opinion the ability to produce purpose is the foundation of the design process. **What do you think about that?**
We like the the use of the term "intention", design is the first signal of human intention (McDonough). The physical, biological, social characters are the humus to build up the logic of the project, precisely the intention, trying to catch the crack that will allow you to push the architecture in the flow: we consciously understand architecture as a re-configuration of the landscape (mental, social, physical, ...). The project must have the ability to open doors, to ask new questions and then give the possibility to continue a cycle, not close it, the goal is not to find only solutions.
Back to the technical issue, our only obsession is the simulation. Assemble, if not build, different tools in the preparation of a device in order to analyze and understand a process in its development, as it unfolds. Then, parameters, algorithms, scripts, do nothing but being a part of everything, are part of the tools that are used to create the relationships of the system, which represents the intention of the project. We use them in a very utilitaristic manner, without losing touch with the realities of production, with the physical manifestation. We do not speak about simulating being an end in itself, but as a connection with the making process.
As we said before, we are interested in the use of simulation as a tool for the generation of the Other, as a device capable of altering the origin and build a new one, in a continuous in-becoming: the simulation becomes the engine of the mutation from the inside, a tool to explore the not-known, non-imaginable, a series of strategies for the exploration of intermediate, vague and uncertain processes. Through the definition of the intention, we try to drive the output, there is still a kind of soft boundary that separates what is controlled and what is not controlled in our projects: the overall behavior is part of a strategic plan, in the design intent, the detail fluctuates in the range of the possible, settling on their own in a position, emerging, not precisely predictable.
This can be achieved in different ways, one of the strategies that we are now trying to use, involves the exploitation of the incompleteness of the system, or to use as an engine of change, the incomplete information array of a simulative system.