ATMOSPHERE
Material for the digital gardener

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Material for the digital gardener? Why refer to architects as digital gardeners? What is the point in suggesting working with something as indefinite as atmosphere? Let us start by questioning ourselves about matter. Within the field of architecture, in general whenever the relationship between technique and space, or between the technology available and its influence on how space is conceived and projected are discussed, concepts are often disfigured to such an extent that it is difficult to hold a fruitful conversation. It is normally stated that radical transformations of matter are those that bring about drastic –and authentic- revolutions in our discipline, as if there existed some form of unknown subject that could be discovered or constructed. The appearance of this unknown type of material would erase the usual way in which we project the physical transformations of our environment in one fell swoop.

We are not here to discuss what kind of new material this is, or whether it exists among us in some kind of embryonic state or to set out the qualities it should posses. Much less to do some household envisioning and predict the fantastic and liberating architecture it would lead to, as a comforting and empty exercise in science-fiction. We know that in order for these transformations to be effective there has to be something more than an invention in the field of material science. In other words, it is not matter that is constantly changing, but rather the way we view it. When we talk about matter we are not referring to something that is out there waiting for us, to an object or a thing, but to a cultural construction that is directly affected by social or political transformations, by evolution in the field of art and thought, and, evidently, by discoveries or progress in technology and science. We would like to stress once more that we are not interested in whether matter changes or not, but in the idea of it that society or a certain discipline have managed to construct and share. Thus, until a certain material culture is established, technological breakthroughs are not capable of producing these changes by themselves. If the idea the discipline has of these transformations were modified, the future could be reconquered as a project, while at the same time rendering the word 'progress' irrelevant. We would start thinking about possible future materials, with finite credit and self-extinguishable, that would not be based on the epiphany of new techniques, but instead on the transformations of our material culture.

For the purpose we are dealing with here, we would like to do a simplifying pirouette and summarise these recent transformations into only two: the collapse of the concept of nature and its later updating, and the massive immersion of culture into the digital world. Let us try and imagine that the vast amount of transformations that have taken place during recent years can be summarized and condensed into these two.

In the case of the first one, we should forget, once and for all, the idea that grants nature a dual condition based on its dominance and the tapping of its resources, and of hav-

ing an idyllic capability to put all the wrongs of civilization right, which means that we are at the same time ruthlessly exploiting it and apathetically admiring its beauty. Bad news for the naïve: that kind of nature does not exist any more. We are surrounded by an other nature formed by fragments of deserted landscapes, natural parks, agricultural expanses, polluted grounds, extensive and magma cities, transport infrastructures.... A mosaic of different natures, some kept in their original state by overprotection and others irreversibly contaminated and altered. This other nature is, in reality, several different natures: an ocean of multinatures with a new beauty (its own beauty, distanced from the idyllic beauty used by modern people as a redemption from the ills of the large city) built around it.

Once these reassuring ideas are removed, a peer-to-peer relation can be established with this nature. It would then be possible to modify this total dissymmetry, typical of the modern age, and transform it into a one-to- one relationship where everything is the performer and the object of the action simultaneously. The meeting between humans and non-humans that Latour calls for could then be made to materialize, and we could think that approaching nature does not redeem us of anything, that if we are capable of entering a conversation with it, conflicts are not going to be automatically solved. We would therefore overcome the indiscriminate and recurrent call for nature that is so common in our discipline and has hindered the development of more sophisticated, perverse or ambiguous (or simply more subtle) relationship protocols.

These protocols could have the quality of teaching certain action mechanisms which, when applied to our discipline, would help make it evolve, would help to provide increasingly sophisticated answers and to make headway in this asymptotic approach to nature.

If we have learnt that living systems operate silently through geometry and this consideration can help us create spatial patterns for the definition of our artificial environment, we could also pose questions about the relationship established by these systems over time and about the way we could learn from them. As in the case of nature, architecture should be not only a stable, permanent object that resists the passage of time with its materiality. We have learnt from the life of consumer objects that architecture can have a best before date. But nature can also teach us that it is possible to define a relationship with time that covers its management, succession processes, disturbances that affect it at each moment or the projection of its death. We would forget about the discipline being in charge of imagining a final and unalterable state or image, and we would turn into managers that project emergency processes for material systems and their management throughout time, their decadence, death and even their succession process. All this would allow us to integrate what cannot be predicted not as something we need to shelter from, but as a working material.

Thus, the architecture corresponding to all of this would become something that would allow us to relate to everything that is outside in a less traumatic and more fluid and natural manner, in the same way as with other everyday objects and technology. By constructing a space, it would become a technical intermediary tool between our body and our surroundings, that meeting of humans and non-humans. It works filtering the perceptions from outside. This new relationship would require our understanding that we do not need to turn to environmental orthodoxy or other simplifying approaches to see how this closeness has been attained, but instead we should commit to developing it as an efficient technical intermediary tool with the natural world to make the peer-to-peer relation possible.

In that other nature, the source of the materials, their authenticity or otherwise, no longer have any value. The process of emulating the characteristics of other materials, either natural or artificial, causes unexpected qualities that are beyond those of the emulated material. Being completely artificial, having an ornamental quality or falsehood would cease to be negative conditions and sport the infinite value of having the same characteristics as the materials they emulate. Only the effect is emulated, not the essence. Synthetic items, be it of material or artificial origin, have removed what we normally call the true essence of things and are now centered on producing the effect.

This new approach to nature would also allow us to understand what the value of producing diversity is and what the procedures to generate it could be. We could thus under-

stand the role of organisation patterns in species and what differentiating mechanisms diversify them into individuals. This means that we would learn to focus our interest not on diversity and its metering and quantification as a fact, but on the agents, mechanisms and situations that bring it about.

Let us now turn to the sudden immersion in the digital experience of our society. One of its consequences would be the lack of visual relation with the purpose digital technologies are associated with. We can no longer visually associate the object with its intended use. It is no longer possible to read in it its operating mechanism, not even the aim it serves. The increasing breadth of tasks that technical objects have to perform has been added to the ongoing miniaturization they have undergone (which, during the 70s, lead to the prediction of a world without objects). They are black boxes that do not create a present and do not communicate the performance abilities they have. These technologies do not need a physical presence or the capability to communicate to operate. These technologies are a means for objects to be liberated in some way of their appearance, and interest shifts to the effect they cause. This move of the object backstage makes it necessary to replace it with a physical phenomenon capable of interacting with us, of serving as interface and transmitting information so we can replace the tangible, real, physical presence of the object with some other form of manifestation.

Finally, the joining of these fields also manifests itself in the working procedures on matter. After thousands of years working on the selection of productive species and on the artificial modification of our bodies we have learnt to work indirectly to modify the conditions and characteristics of the subject matter. However, in the digital world, any operation, from the simplest to the most sophisticated, is governed by scripts. All actions are controlled by mediating, not directly, with written lines of simple actions, and, in turn, any modification of a computer model is stored in its record by a command sequence. The object and the transformations operating in it are defined by means of program lines, on which to operate indirectly again. Digital gardeners, the breeders of species of zeros and ones, define their species and operate on them through interfaces, in sequences of written command lines. Actuation is done with packages of coded information, by means of a technical language acting as intermediary between the subject and the object.

For all of the above, during recent years our office has been interested in working on systems that dissipate, consume and absorb energy dynamically in the shape of environmental systems. What we understand as space is therefore transformed into a set of perceptions linked to environmental effect generated by managing various forms of energy (that is, working by involving the whole configuration of the building in producing environments). We therefore produce scarcely visible environmental technology, as well as technical systems that induce spatial, environmental and visual effects and shift the interest from the object towards what is achieved (in other words, the effect). There would therefore be a move from a system of relationship between objects where their position, size and other formal characteristics generate a system that operates by figures, association and layout towards a different system based on the creation of reduced-scale environmental systems that are regulated by command sequences. It would then be possible to work with the intensity of stimuli, with altered states and various levels of perception. All of this at different scales, from microscopic to landscape.

This hasty review leads us to think that the production of cities and landscapes only calls for a radical change in strategies, instruments and ways of forming reality that are similar, if not identical, to those requested by digital technology and the new approach to nature.

We could then think about whether the categories of city, landscape or infrastructure of times gone by can be combined into a new category, into something that contains the seed for a landscape with all its extension and materials, something that can be materialized by means of techniques developed for the creation of artificial environments and the crude efficiency of infrastructures. Something that can grant a new meaning to the discipline that deals with urban phenomena and can place it outside the standardizing quagmire of western urban development. Something we would like to call an *infrastructural ar-*

chitecture of landscapes. And something that allows us to cast a detached look upon the time when there were accumulations of materials and technical systems called buildings. We could wonder what would happen if we inserted succession and natural growth laws (as well as geometries and generative laws of artificial environments) massively into our artificial landscapes. Welcome to an infrastructural city with natural characteristics, artificial material landscapes that have evolved and been grown as if they were living beings and that have replaced the role of what was once known as architecture.

If we think thus, we are confronted with an exciting prospect that includes the same mutation of working systems and cooperation, of gathering of knowledge and development of tools. We understand that the city –or the landscape- are calling us to an urgent and enthusiastic action. The city could be an exciting real-time laboratory of Environmental Infrastructure.

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