

## AESTHETICS AND SUSTAINABILITY: ALTERNATIVES

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Sustainability has become a generic term covering an innumerable field of activities, from geopolitics to industrial design. Its origin in the management of natural resources which allows a balance between progress and biodiversity is too general for it to be applied objectively in the field of architecture. In fact, many interpret it as an ode to good intentions, echoing for architects the title of Colin Rowe's work "Architecture of Good Intentions", a diatribe against moral attitudes in modern architecture, in that it raises suspicion regarding the nature of sustainability – either architectural or merely rhetorical, if not marketing related.

At the same time, in very few decades the field of architectural sustainability has gone from being a proclamation originally rooted in the post-hippy context, with individualistic and romantic manifestations - often inspired by Buckminster Fuller, crossed with different thinkers - to becoming a logotype headed by large engineering companies and some architects who originally encouraged hi-tech architecture. This move has coincided, not by chance, with the change of stance on the part of the main electric and oil companies which since 1973 have gradually, but persistently, progressed from full-on rejection to leadership in the energy and construction products sector applied to the architectural scale. The phenomenon has been accompanied by growing social, political and media interest in sustainability which - based on new regulations and popular and political demand - is transforming architectural practice, design techniques, which up until now had focused on the tectonic aspect to a greater or lesser extent and are now aimed at "thermodynamic" comprehension of the object of design. This is an interpretation which requires the assistance of new experts, such as physicists and ecologists, as well as new ways of approaching the project.

Thus, the approval of new Technical Building Codes (in Spain and all over the world) entails a major modification of building practices and a technical effort on the part of architects and their consultants, forced to comply if they wish to move away from strict convention to reconsider their own work methods, forced to replace the "construction experience" with parametered environmental modelling entailing the irruption of physicists, ecologists and engineers into the process of the project, just as it was possible to observe the appearance a few decades ago of structural engineers and installations.

This move from the mechanical aspect to the energetic one in the chorus of experts accompanying the former solo voice of the architect shows the precise abandonment of a modern conception of architecture based on modular construction and on industrial materiality in favour of an interpretation which some experts, such as Sanford Kwinter, have not hesitated to name "thermodynamic", describing the abandonment of the "tectonic" model of traditional knowledge of architecture and its teaching, and replacing them with a new "biotechnical" conception/teaching, that can

provide the architect with instruments that allow him/her to think of his/her buildings as live organisms, entities permanently exchanging energy with their environment, with a limited life cycle: despite its rather messianic tone this idea elicits a certain amount of unanimity.

Not only does this panorama imply a positive transformation of the architect's role and of the knowledge required for his education in a new cultural context - urgent and interesting matters in themselves which demand attention from academic circles, which display a certain amount of inertia and scepticism when faced with technical change - attention which has not yet been addressed with sufficient intensity. It also implies a battle of competences between what was historically the "solo voice" of the architect and the increasingly noisy "chorus" of experts, encouraged by companies and manufacturers of environmental technology.

Throughout the 90s we have observed the consolidation of an image of sustainability that clearly concentrates on the development of intelligent or active closing solutions which combine sensors and new materials to compose increasingly more complex and sophisticated closing solutions, which are often - too often - applied to ugly, old, badly conceived buildings. The sustainability of consultants and some architects has become to the eyes of the rest of professionals, and especially those of students, a parade of *hi-tech drag-queens* which hardly stimulates creativity. Arup, the largest and most international environmental consulting engineers company, who are to a certain extent responsible for this portrait, has of late spread a diagram featuring two triangles where it radically questions the future of this addition system for understanding sustainability (+ layers + expensive + sophisticated). As an alternative, it proposes an interesting taxonomy of sustainability - based on active systems, passive systems and architectural form - and an inversion in the importance of elements at stake in favour of their real work effecting thermodynamic behaviour in a given set of conditions. That is to say, the restoration of primacy to form in architecture, an idea widely supported among architects, who see their role once again being recognised; as well as gaining support among those who defend the history of typologies as a lesson in sustainability with regards to specific conditions of technical evolution.

The diagram, useful for the classification and organisation of the sustainability map in architecture, and therefore also useful for the organisation of debates on the subject, would not be of greater importance were it not for the fact it supports some of the few architects who have adopted viewpoints far from *hi-tech* to approach sustainability, points of view that have focused on subtraction processes instead of addition ones and in increasing energy performance with very economic, *low-tech* technologies with a clear social dimension. Some of them, as is the case of French studio Lacaton and Vassal, have created a true identity mark, a style, which has caught on with greater strength among European students than addition proposals, often associated with a certain capitalist corporativism, which contradicts the politically alternative character attached by many to sustainability.

On the other hand, some architects from countries outside the industrial and cultural circuit of the first world have managed to gain a voice of their own. Architects such as

Bruno Stagno are an example of this, not only due to the skilful management of natural and low-tech resources of their architecture, but also because they have managed to establish international forums for debate which - attending to demographic and metropolitan movement towards the tropical belt - advocate the establishment of East-West dialogues to replace the North-South systems of influence of modernity, where the South always took on an "exotic" role. Bruno Stagno, director of the Institute for Tropical Architecture, established in Costa Rica and Aga-Kahn and Holcim award-winner, is at the forefront of this rising awareness of the progressive protagonism of the problems of tropical metropoli and the need to create a culture and aesthetics of their own, distanced from the model spread from the "cold zone".

It is also worth considering certain "environmentalist" contemporary aesthetic attitudes as poetic anticipations of an integral environmental culture that would give rise to a given 0 degree of architectural materiality, a material evanescence or "blankness"<sup>(1)</sup> that — with work such as that of Kazuyo Sejima or Philippe Rahm in mind — while it is not possible in the least to consider them technically sustainable with the parameters available in the present, point towards the construction of an aesthetic consistency that is not unimportant for such an idea - a sustainability which could be said to use air as the main construction material.

It is also worth asking ourselves whether this evanescence is not simply a residue of modern material purism - a resistance to accepting other conditions and other material aesthetics associated with sustainability. That is to say, we should ponder whether if faced with the dialectic confrontation of addition sustainability versus subtraction sustainability, the North-South versus East-West confrontation or the confrontation posed by dry cold versus the sustainability of humid heat; there does not exist a universal hybrid technical and aesthetic model, a product of the combination of high technology and massive building systems, almost archaic: intelligent materials that are capable of mutating their transparency in different bands of the solar spectrum, in communication and interaction with certain passive parts of the elemental construction that act as warehouses. In short, hybrid material aesthetics, useful in the first and third world, capable of joining the three elements of Arup's triangle: the efficiency derived from architectural form, passive systems and active systems in a new combination - a material "crossbreeding" in accordance with contemporary demographic changes.

In addition, sustainability gives rise to a never-ending number of questions by changing scale slightly, and focusing on what is nearby - the sphere of design - or the large scale - the sphere of town planning and landscaping - until reaching the well-known problems of geopolitics and economy, the dimension of which is crudely exemplified by the Kyoto disagreements.

From the point of view of contemporary architectural culture, once we have tested the actual spread of stances, references and practical cases, a particular idea seems crucial in order to approach this confusing panorama which has been left unattended by

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<sup>(1)</sup>My use of this term is taken from the interesting research work being carried out by Sergio López-Piñero

universities, at least in its cultural implications: if there only exists an aesthetic debate, if there is an idea of beauty following sustainability, it will be here to stay. It is necessary, and urgent, to propose a debate capable of concentrating on this matter, of crossing technical and cultural languages, in search for minimum agreements, a consensual system for working on sustainability, to render it fruitful on a technical, critical and aesthetic level.