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**Critical Sustainability in Architecture**

The standard literature on climate change and global warming has long since established that the building industry counts among the most damaging business sectors worldwide. Seven years ago, the UN Programme “Sustainable Buildings & Climate Initiative” issued a summary for decision-makers gathered at the Cop15 summit. Here they famously claimed that buildings are responsible for more than 40% of global energy use and one third of global greenhouse gas emissions, counting both developed and developing countries. Correspondingly, the industry was also identified as the most promising for effectuating change.

Today, the European Commission repeats these numbers more or less verbatim, yet as figures pertaining to the EU. The Commission’s website informs that buildings are responsible for 40% of European energy consumption and 36% of its CO2 emissions. Their recommendations also echo those of the UN from 2009. Noting that about a good third of the EU's buildings are over 50 years old, they suggest that by improving the energy efficiency of buildings, the total EU energy consumption can be reduced by 5 to 6% and CO2 emissions may be cut by about 5%.

### The building industry has not been slow to respond to the challenge. Among architectural firms, large and small, in government and municipal planning offices, at teaching institutions, among engineering firms and in the industry at large, sustainable building technology has emerged as a city brand, a company hallmark, a civic and company responsibility target and, of course, a lucrative commodity.

From our perspective, it is apposite in this context to highlight the word technology, as the concern for sustainable building performance is habitually phrased with a privilege toward engineering. Today’s dominant strategies include low-energy building materials, passive ventilation, LED lighting, thermal energy storing, upcycling and recycling, double enveloping, etc. To build sustainably is primarily considered a technological challenge. The goal is to optimize technical performance. With the help of advanced software to simulate and computate building performance alongside detailed protocols and certificates for guiding and assessing design, architects are now well equipped to moderate their proposals according to parameters of energy use, CO2 emissions and future material upcycling.

However, against the strong consensus behind this engineering logic, a number of architects have voiced concern. Peg Rawes, Senior Lecturer at the Bartlett School of Architecture, UCL, has noted that under this discursive regime, many complex social and cultural aspects related to building performance tend to be ignored (Rawes, 2013, 5). With the prevailing focus on technological building performance she notes declining attention to the built environment’s agency upon human affairs, historical meaning, cultural habits, and social values. This cleft between hard and soft performance values, between technological performance and social performance, is growing increasingly deep and frustrating. Architects who have tried to follow down both paths at once, such as David Leatherbarrow, have typically come up with somewhat disappointingly modest proposals.

With Rawes, we would like to pursue the question of sustainability down the road of social and political performance, toward an agonistic and non-harmonious ecology. Spearheading theoreticians in the field, such as Timothy Morton and Félix Guattari have outlined an agonistic concept of ecology that emphasizes the complex housekeeping of resources belonging to irreducibly distinct practical domains. Choosing this path does not, then, mean to disregard technological improvement strategies, but rather to consider engineered solutions as one housekeeping measure among many. On this path we are likely to encounter situations where technological advances impose undesirable limits on social or political performance, and in those cases one will have to reflect upon and modify procedures or solutions that otherwise would not have been questioned.

So, what kind of a pathway are we setting out to explore? Merely pursuing more complex social situations is hardly satisfactory. We’d like to take one step back to catch sight of a larger picture, one which shows the preconditions for grappling architecturally with non-harmonious ecology. We don’t purport fixed and ready solutions; at this stage we are humbly searching for viable methods and convincing tactics—however, a number of conditions of inquiry have begun to clarify.

One of our students, James Alder, proposed a project for the city of Chittagong, famous for the ship-breaking industry that Annette Stube from Mærsk spoke of yesterday. Trying to intervene, with one building, in a deeply unsustainable local industry underpinned by dodgy global trade, his work may serve to illustrate and underscore the conditions for thinking architecturally about a sustainable building culture.

The first condition for embarking upon an ecological building practice is simply to perceive the difference between an architectural and an engineering conception of sustainability. In somewhat reductive terms, the difference can be introduced through a practical distinction: namely between asking how a building can be made and asking what it can do, and more specifically, what it can do to its surrounding elements. The former question—how a building can be made—addresses primarily the construction of the building, even when one considers how the finished edifice will perform and how it will eventually be dismantled. This, of course, is the engineer’s question, although many architects depart from it as well, especially if they conceive of buildings as isolated objects. The latter question: ‘what can the building do,’ is a rarer one. It asks rather about its performance upon something else; as it undergoes construction, as it is finalized and inhabited, and as it is deconstructed or abandoned. The political architect would ask: what does this building facilitate, what does it obstruct, what kinds of actions does it promote, which relationships does it strengthen and which ones are weakened or destroyed. Alder’s proposal here is a domicile for a new institution, a publically accessible auction house for ships to be dismantled, combined with a records archive and exhibition area displaying ships for sale. It facilitates institutional transparency and independent monitoring of international regulations in a place where holds sway, to the detriment of the thousands of workers who risk their lives on Chittagong’s beaches every day.

[Chittagong ship breaking is sustainable in the singular sense of recycling steel]

For the political architect, the multilateral exchange between a building and its context is conditioning and actively reciprocal. For the engineer, it is at best secondary and reactively one-sided. Most architecture today conceives of the building as an isolated unit or an aesthetic object—including many green buildings, which are designed to be sprinkled out anywhere, in any number, at any time.

In the sixties and seventies, political architecture was considered a viable tool in the hands of the social engineer. We have since learnt the lesson, that architecture does not dictate or determine social behavior nor does it serve obediently in the hands of strong political ideologies. You do not build a particular society through a particular architecture. As a political instrument the built environment is blunt and imprecise. However, we believe it is exactly this soft and non-coercing kind of governance that constitutes the perhaps most appealing aspect of the political agency of architecture.

Secondly, one would have to consider as a precondition the question of scale. Scale is an interesting and difficult concept in architecture, one which I will not try to cover here. Let it suffice to say that buildings are not reducible to geometrical form or proportional relationships, as buildings, unlike such abstract notions, have size. In geometry, size doesn’t matter. In architecture it does. Imagine, for example, a very small airport and you realize that size is a relational thing. Nothing is big or small in and of itself; the Eiffel tower, to take another example, is big relative to a human body but small relative to the city of Paris. More interestingly, when built it was scaled in relation to something other than itself: its size was taken from the symbolic significance of the World Exhibition, yet in a second phase it found itself perfectly scaled to radio waves that could be transmitted from its top mast during the first World War. Today’s sustainable architecture is most often scaled after the problem it tries to solve. From a technological perspective, the effective solution should be sized 1:1 with the problem. This principle is reflected in the comprehensive ambitions of green certificates, environmental subsidies and legally enforced building standards. The effects aimed at will only come about when a sufficient percentage of the building stock complies. Only when enough buildings are green will the problem be solved. The other path offers a different logic. The Eiffel tower was not as large as the radio waves it emitted. It was large enough to allow the waves to be as large as was necessary to be effective. The tower’s size accommodated another size, even perhaps a size of another kind. James Alder envisions that his auction house tower, looming large over the rooftops to allow for a clear view toward the beaches and the ships moored out in the bay, is sized to accommodate regulating forces strong enough to affect the global shipping industry. Their scalar relationship is not analogous but compatible. A building does not have to be as large as the problem it tackles, only large enough to accommodate that which has an effective impact upon a non-sustainable situation. However, this approach does not automatically oppose large-scale refurbishing projects of a technical kind – it might to the contrary support them – but the thinking that scales the architecture is different.

Third, and finally, a brief comment about the generic and the particular. For a number of good reasons, also economical, the conventional way to tackle large-scale problems supports a mode of production that iterates the same beneficial effects wherever the problems appear. This tends to privilege a generic outcome: a series of identical objects or iterated ’best practices’. Repeating the same solution is believed to increase the positive outcome. Although we know from innumerable historical examples that generic mass-production in architecture often fails to accomplish its political goals, this is still how sustainable buildings are mostly made. The result is an iteration of tedious, functional, ready-to-use, common-denominator-luxury-imitations rolled out indiscriminately over various urban areas. Imagine a few decades from now, when passive houses are yesterday’s technology and the design looks hopelessly démodé, how these buildings will be considered a repetition of the mistakes from the social housing projects of the 60’s. Then, our children will again bear the burden of a major building stock that no one wants to live in and which therefore is abandoned and poorly maintained at a great ecological and social cost. With a different approach there is good reason to emphasize the particular over the generic. An architect like James departs instead from local, even singular conditions for economical and social sustenance in the design, meaning that the building is compatible with the competences, abilities, desires and resources that are already there, now. The idea is that the building will be part of the existing ecology and hence be able to transform with the development it is itself part of inducing. To stress particularity means to privilege a unique design that is able to do good to a uniquely composed environment. It is the opposite of all those spectacular singularities by starchitects which litter most green cities with sustainable growth ambitions. It does not have to be costly or fashionable.

So to wrap up, the ecological path toward a political architecture would be conditioned by three concerns: 1) that architects begin to consider what buildings can do and let go of how they look; 2) that the scale of the built structure is no longer considered analogous to the problem it is meant to solve, but rather that its size is able to accommodate something that brings about an effective solution; 3) that the generic is not accepted as the necessary outcome of an industrial process, but that it is abandoned in favor of the custom-made intervention.

Finally, insofar as the existing building stock is itself a problem, the way forward may nonetheless lead elsewhere than towards the technical refurbishing and conservative transformation that presently is being executed on a mass scale: smaller, cheaper interventions may have a longer-lasting impact insofar as they are involving themselves in social sustenance.

[Peger “The Internet of Things” mod et *digi-eco-hyperobject* (der endelig vil gøre det helt af med natur-kultur-dikotomien)?]