

Texts and Lumps: Thoughts on Science and Sustainability

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In an essay entitled *Texts and Lumps*, the pragmatist philosopher turned litterateur, Richard Rorty, joins a number of philosophers and sociologists of science (Bas van Fraassen, Bruno Latour, Peter Galison, etc.) who have followed T. S. Kuhn's seminal text, *The Structure of Scientific Revolutions*, into the murky relationship between Nature and Culture. Discussing the practice of western science, he offers a pragmatic analysis "which construes the reputed hardness of (scientific) facts as an artifact produced by our choice of language game." This is simply to say that our (and science's) observations about Nature are both shaped and directed by antecedent conventions stemming from our use of a particular vocabulary. By unsettling the precision of science's privileged aim toward its' conventionally understood target - namely the *unmediated* unveiling of "nature's facts", he reminds us how intertwined *things* (e.g., cosmic, terrestrial, sub-atomic lumps) are with the *words* (e.g., literary, scientific, architectural texts) we use to delineate them in our social discourse. This is very much the case, it seems to me, as we speak about "Sustainability".

Properly considered, "sustainability" describes a cultural formation still very much in the making. Attempts at greater descriptive precision notwithstanding, it has become an umbrella term for many (often conflicting) forms of proactive attempts to mitigate humanity's transformative and negative impact on particular natural systems. Furthermore, I believe the major reason why sustainability continues to struggle to clarify its practices (both politically and by extension architecturally) has to do with the difficulty of comprehending the extraordinarily complex manifold of natural ecological processes (lumps) and cultural artifact-making practices (e.g., "texts" like architecture).

As we all should know by now, like it or not, our discipline has been shoved to the front line to help sort out this affair. We find ourselves here for very different reasons than those which initiated architecture's uneven involvement in "green" architecture which emerged in the late '60s only to drift in the doldrums for the next 25 years. At that time, architecture seemed to take a salutary role, offering up an exemplary ethic in its modest solar, geo-desic, active/passive energetic and essentially populist rebuttals to the corporate-industrial-military complex responsible for the degradation of the earth. Today, however, architecture's inadvertent complicity in this very complex has been made eminently clear and has most of us scrambling for cover. So what can we do about this and, more importantly, how do we prepare our students.

I don't want to reiterate the usual statistics and apocalyptic scenarios invoked to get our attention on the state and fate of the Earth. In thoughtful moments, I am sure all of us have felt the turn of the worm at the prospect that we might *actually* be setting in motion our own end of days. However, these arguments have been shown to be pretty much non-starters for many of us grown complacent in the comfort of a fabulously high standard of living, cocooned within an extraordinary array of environmental prosthetics, and hooting w/ cynical, albeit nervous, laughter at the highly mediated information culture which we like to think we have cleverly figured out how to stand over and against. This early 21st century state combined with our inability to focus on - much less conceive - what Stephen Jay Gould has referred to as "deep time" is not

conducive to fast action in environmental matters. Nonetheless, there do seem to have emerged two activist schools of thought in architecture, which are doing their best to provide direction for all of us. I will summarily mention them and what I consider to be their shortcomings briefly and then suggest a third model which we are trying to develop at the Department of Architecture at Parsons School of Design.

The first model in the education of an architect is what might be called the “organic”. Its (grass)roots are in the activism and “naturalistic” attitudes of the 1960’s. Leery of high-corporate technology and aligned more closely with the spiritualism of “deep ecology”, it combines a social ethic which draws heavily from the activist politics of the environmental movement, citing terms like “responsibility” and “stewardship” and a design ethic which valorizes design-with-nature in the Wrightian sense. Non-heroic and anti-formalist, it appeals to an architecture either transparent to the land in which it sits or utterly didactic in its humble and discrete expression of “natural craft “ (see Ruskin) and pure natural energy-responsive tectonics.

The second model which might be called the “technological” is in many ways the opposite of the first. Here the “techno-fix” ideal is celebrated and a stress on performance criteria and analysis is key. Futurist in orientation and scientific in method, this approach stresses its belief that despite *instrumental* technology’s agency in the environmental problems we face, an *enlightened* technology which follows the bio-physico dictates of “natural” systems can solve them. Mechanistically expressive and functionalist in origin, it appeals to a brave new world of architect cum-engineer where formulaic science and design conflate.

For rhetorical purposes, I have provided an abridged synopsis of both models to suggest a third, perhaps a *media via*. In my judgement the first two models do not appreciate Rorty, et al’s insistence on the embeddedness of nature (lumps) and culture (texts) alluded to above. In fact, I think both have a science problem. The first lacks an informed view into the *social* sciences which might help it better understand the historical and necessary complexity of humanity’s relationship to the earth, while the latter overstates the case for the *natural* sciences in its capacity to translate the brutal thrust of material reality into positive social action. What I am arguing for is more science in the schools of architecture - and by this, I mean *both* the social sciences which examine our textually-based cultural practices and the natural sciences which help us to understand the terrestrially-based “lumps” from which we mold these practices.

Now, the difficulty with adding social and natural science course material, as we all know, is in the dilution of core requirements sacrosanct in our present understanding of an architect’s education. We simply cannot teach chemistry, biology, ecology, anthropology, sociology, environmental philosophy, etc.; furthermore, we wonder - shouldn’t students get this in their high-schooling and/or undergraduate work? Well, yes, I would hope so; it would make things easier for sure. But there is an epistemological difference between taking courses of this nature in the free-floating context of a generalist early education as opposed to confronting them in the situated and applicatory context of a higher education in professional architecture.

Parsons is a small school of architecture; we could not open the curricular space for these courses even if the NAAB would let us. Furthermore, I am suspicious of courses related to sustainability as “option” courses as it uncouples them from what should be normative to architecture and it is

precisely this sense of normativity for sustainable *thinking* that we all should be promoting when we speak of *any* aspect of architectural education. At Parsons, we understand “sustainability” as equally an issue of culture as nature and, as such, it requires a level of “scientific” awareness alluded to above. Furthermore, all courses simply begin with the assumption that the affinity of architecture with natural processes is historically based, theoretically critical, and a technically inventive way to (re)inform design.

- History courses situate architecture in past & present environmental & cultural contexts, presuming that human and natural environments form an interrelated system and that cultural/architectural history is inextricably linked to the history of how land is used.
- Technology courses *begin* by focussing on natural systems - wind, sun, rain, etc. and their biotic effects. Alternative energy and sustainable practices are presumed as *convention* and fossil fuel technologies are studied as “historical” technologies.
- Digital courses note the cybernetic language of networks, webs, feed-back loops, etc. derived from the study of ecology.
- Theory courses maintain a vigilance on extra-architectural social practice and discourse by watching how our words direct our social actions (e.g., does “sustainability” with its implication of a *steady-state* system properly connote the complex variability of emergent ecological and evolutionary processes?).
- Design studio syllabi are accompanied by required seminars and readings in both the social and natural sciences to support design intent. One particular core studio focuses directly on landscape as *both* a culturally constructed and natural system.
- Lastly, we are attempting to weave this content by bringing studio projects into a student’s contemporaneous technology, theory, and history coursework.

It is in the evolving culture of our school to view sustainability not simply as a moral responsibility nor a feat for engineering science, but as an intellectually exhilarating and technically provocative opportunity to speculate on a host of new kinds of tectonic relationships and properties. This position believes in an architecture that tries to understand its affinity to the earth in a *performative* way, not due to dry “instrument readings” but rather by the emergent tectonics, spaces, and details that appear when an architecture maps itself on to natural processes, wind, sun, water, and soil. And emergent is the right word. There is much forthcoming that we cannot predict and the undeveloped nature of what effective sustainability means coupled with the critical importance it holds for us in the century ahead requires the broadest understanding of cultural texts and natural lumps we can provide.

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