

the energy of architecture

*a reaction to an excerpt from
Fire and Memory [1]
from the position of a developing architect*

Michael Wesch, a cultural anthropologist professor from Kansas State University recently lectured on the Virginia Tech campus about his pioneering teaching method as one plausible solution to the clash between today's students and traditional higher education modes of learning. While intriguing, the context of the talk is not important to the purpose of this paper. Rather, a statement he quoted from a famous academic to help explain the dynamics of user-generated and consumed content on the internet can be applied to our topic here:

“you always consume more than you create...”

As someone who aspires to tread lightly on the planet via personal and professional means, the statement is in itself sobering. While the original context of the statement had to do with internet information consumption and creation, I reapplied it architecture as a perspective for this inquiry into architectural matter and energy so introduced by Galiano and Cariño.

Is our architecture one of consumption? Does it mediate environments more suitable for consumption than creation?

From an energy standpoint, modern environmental building systems aim to reverse this trend where our buildings become energy producers and contributors to the energy grid. Yet I am not just speaking of measurable energy units here. And neither is Fernández-Galiano in *Fire and Memory*. There are three concepts of energy discussed here:

Energy in Architecture:

Energy in architecture is meant here to mean energy that is measurable in some way. One interpretation is that the matter of architecture is in a constant ebb and flow of destruction and construction. [1] Another interpretation is in the measurement of the construction process and ongoing operation of a building or what one feels as warmth. From the energy required to harvest, prepare, deliver and erect materials to the monthly power bill, these are all measurable in some way.

The architecture of a building has a primary impact on measurable energy. This can be seen in everything powered on, thrown out or left running. Buildings also have secondary impacts in the way inhabitants must operate within the built environment. Alex Wilson in a recent article from GreenSource reports on the lack of architectural design focused on the problem of a commuting workforce:

“Given the emphasis we put on the energy performance of buildings, it's a little surprising that for a typical office building, more energy is actually used to transport workers to and from the building each day than is consumed in the operation of the building itself - typically 30 percent more according to an analysis I did a year ago.”[2]

Most would agree that governments and citizens cannot continue to take for granted the generosity of our natural systems. Enter the green building movement and programs such as Leadership in Energy and Environmental Design (LEED). Yet, as Mr. Wilson has demonstrated, despite this attention and good intention, it is questionable how much LEED can reasonably do for energy conservation – much less architecture. Indeed, the ‘ten shades’ of green building as proposed by Peter Buchanan deal with the notion of lifestyle. [3]

Professor Wesch also quoted Steve Boyd, a prominent author focused on web culture about the Internet: “we shape our tools, then they shape us.” Borrowed from Winston Churchill, the original quote is, “*we shape our buildings; thereafter they shape us.*” Because there are architectural examples of both positive and negative consequences for people, both of these statements have applicability to this discussion.

This irony exists in our architecture, and the green building movement which introduces new tools via industry marketing is no exception. For example, for energy efficiency, one approach is to make a building tight – impenetrable to infiltration. Yet houses that do not breathe become sick and create sick environments for people. Additional mechanization, requiring additional energy, is required to exchange air with the outside. These houses are plugged into the equivalent of a life-support machine.

This contradiction is a unique human condition but is present throughout history regardless of technology. And as in the example just provided, some green building practices only further remove us from being an active participant in architectural energy flows put forth in fire and memory.[1]

The precursor to Churchill’s statement, points to contradictions unique to the human experience. It is this human condition which is at the core of my evolving position on architecture.

For example, our world dominance can deliver any material produced to any location. For a price of course, but even if you could, one must stop and ask if they should. One primary strategy of interest is the use of local materials. This addresses the embodied energy of materials as they are not transported as far and contributes to the building being “embedded in place” and a connection to community [3]. And this leads us to something less tangible: critical regionalism, not to be confused with the vernacular, that enhances “place” by seeking an identity via modern socio-economic and political energies through representation in architecture [4].

Architecture as Energy:

My position as an architect is evolving in part because I am new to the discipline. Also, because my definition of “position” insinuates a fixed point or opinion, this is inconsistent with a single or formulaic architectural outlook. Thus, I must concede that my position on energy in architecture is more of a range or field prompted for an attraction to oppositions. Architecture as energy deals with energy more or less immeasurable.

For example, well before I ever consider ‘green technologies’ my first inclination is to connect people to the universe. I use an expansive term here quite intentionally as I believe people need a physical connection to not only our earthly bounds, but also a spiritual connection to the cosmos. This connection is not obtained by making the buildings people inhabit energy efficient, but by

using architecture to instill a sense of heightened awareness and sensitivity (immeasurable energy).

I don't have all of the answers, but I think this is architecture of stimulation – and this stimulation is somewhat of an empty kiss if the building simply addresses energy or material in an “environmentally conscious” manner.

Architecture is a latent and temporary embodiment of energy – bound up in the materials themselves, but also in the energies of man: the architect, the builder, etc... This type of kinetic or anticipatory energy lying in wait can be described as ‘potential’ or anima that surrounds objects of perfect stillness. [5].

This is the energy that need not be saved as in energy efficiency, but rather celebrated as in human potential. Thus, I return to my field of position as an architect: resources are what they are: resources and not waste products. Thus, as a resource-minded architect, I will work to find the best opportunities for my architecture to be resource savvy and balance a celebration of latent energy and practical energy efficiency in my architecture, of which both will be dedicated to form and function, keeping in mind that the energy of the human spirit is just as important, if not more so, than energy savings.

Energy Threshold

Therefore, the stimulation needs to be of two sorts: real and unreal; physical and spiritual. I believe that one of the best architectural conditions that respond to these oppositions of connection is one of threshold.

Threshold is often used to describe the architectural condition that separates inside from outside, and therefore a contradictory human condition. On the one hand, there is a need to protect oneself from nature. On the other, there is an acceptance and adoration of the nature that sustains them. And it is this idea of threshold I believe to be important because it marks the phenomenological boundary between inside and outside, or in other words, what we attempt to control in nature and what we cannot. Or in terms put forth by Fernández-Galiano words, organization (built form) from chaos (fire).[1]

The oppositions and links between fire, hearth, home and city is at the very core of humanity as is the precarious inside/outside relationship we have with our world. The same way fire evokes notions of primitive beginnings, every time we enter or leave a building we replay the age-old quest to either shelter ourselves or take our chances in nature.

I concur with the authors of Fire and Memory – given the theoretical weight of energy in architecture the absence of energy in architectural analysis and criticism is odd. It is also concerning that the emphasis in the building industry today is placed primarily on measurable energy. The combination of these two factors does not set a good precedent for architects or those who would consult them.

Our architecture is one of consumption and it can create environments for the sole purpose of consumption. Yet architects have the opportunity to create buildings and places that have the ability to create energy in people that can take the form of a heightened spirit, a passionate lifestyle or create a simple interaction and experience with the natural world that suggests a knowing respect for the wild we keep at arms length and yet hold so dear.

References:

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