Beyond LEED
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An Un-flushable Urinal: Thoughts on the Aesthetic Potential of Sustainability in Architecture

"It is self-evident that a truly radical invention is one that nobody knows how to use." – John Szarkowski [1]

Among the characteristic tendencies of enlightened making in the West is the lag of time it takes for a radical new aesthetic ideal to be fully realized in cultural production. Consider the first generation of Italian Renaissance painters. Armed with a new and powerful technique – linear perspective – and a new and powerful cultural desire – to revive the glory of Classical civilization - most Early Renaissance painters in Italy continued composing shallow, laterally composed Gothic tableaux, only in more believable space [figures 1 and 2]. It wasn't really until the Italian High Renaissance that deep space was widely used to carry actual *content*. The infinitely unfolding distance central to Leonardo's *Annunciation*, for example, serves organically as a visual and metaphoric threshold. Since this deep line is also the line of sight of the viewer, it gives profound and resonant meaning to the story [figure 3].

The lag may arise because the agent of change is initially technical – like the development of the arch, oil paint, air-conditioning, digital imagery - and time to experiment is required for the consequences of each new method of production to suggest aesthetic possibility. It may also be that the ideal comes first – as with Michelangelo, Stravinsky, Cubism, Cage – and has no initial technical consequence, but is itself so conceptually beyond any norm that a new mindset is required to understand the implications. Revolutions in theory and technique often occur simultaneously, but isolated instances exist in which a revolution in ideas follows a revolution in technique, and vice versa, and these examples usefully indicate the lag. For example, following on the purely technical discovery of photographic reproduction, the first attempts at "artistic photography" essentially re-iterated pictorial composition formats arising from painting [figure 4]. It took a full generation, and a young one at that [2], to realize how the inherent qualities of the technology might be used to redefine aesthetic boundaries [figure 5]. A counter example, of a radical idea coming well before its consequences are realized broadly, is Duchamp's "invention" of *readymades*. While the upending impact to aesthetic theory of an object *chosen* but not physically manufactured by the artist was recognized at the

time (the *Fountain* uproar occurred in 1917), the conceptual possibilities suggested did not really flower until the 1960's [3].

Typically these two agents of change - technological invention and revolutionary aesthetic insight arising from cultural desire - have the sequential simultaneity of a chicken and egg relationship. Neither comes first, and you can't have one without the other (though it often seems the histories of history cyclically choose sides [4]). If some of the insulating systems currently used to save energy in buildings are a spin-off of technical experimentation funded by NASA, that experimentation initially serviced a larger cultural desire – to establish American societal superiority (by getting to the Moon first) – itself fueled by a technical development – the launch of Sputnik – that was the consequence of still another culture's desire, and so on. Similarly, it seems clear that evolutions in *technical* environmental regulation in the building industry, such as LEED, have arisen from a deep *cultural* desire to do something in the face of the deleterious consequences of existing techniques. The invention of carbon sequestering pavement didn't happen in a vacuum!

Accepting these two alternatives are bound, and the difficulty of establishing precedence, there is still advantage to considering technique and theory (for lack of a better word - I simply mean the operational idea that gives a strategy cultural value) in isolation. Each has a role, and it is difficult to responsibly speak of the history of aesthetics without thinking about the consequence of one upon the other. I mention this because it can argued that LEED to a degree serves to uphold a pre-existing aesthetic; or, perhaps better, does not directly serve to substantially or directly take an existing aesthetic ideal apart. Aesthetics are not the overt target of LEED, those tacked on "design innovation" points notwithstanding. The target is primarily improved technical performance. Still, since this desired performance is in theory of a nature so fundamentally improved from what preceded it, the change it envisions can metaphorically be compared to depicting the world by camera versus paintbrush, a technological change from which other evolutions should spring.

It follows that in the work of the first generation of performers (that is, architects working today) there should be as yet scant evidence indicating the aesthetic revolution that is certain to follow. There should be, like better Gothic tableaux, merely more of the same, just more efficient. And open any *Dwell* magazine and you will find architects busily congratulating themselves for accomplishing what Marcel Breuer did (better) sixty plus years ago, only now with *double-glazing, ash-entrained concrete* and *Ipe*! [5] There are, of course, architects who are not just retrofitting nostalgia, but are using the technical problems posed by environmental performance to evolve their work. Here, Norman Foster's exceptional output is the key

example. There has not been a noticeable break in the character of the firm's designs as these have evolved to ever more exceptional environmental performance. Sustainability is not seen in this work as essentially revolutionary, just another problem to add to the long list of performance parameters. *Evolve*, rather than *re-invent*, is the operative verb. Even, and it pains me to write this, a building as seemingly ambitious and experimental as Morphosis' San Francisco Federal Building [figure 6] I believe represents a series of formal design strategies in place in architectural discourse *prior* to the rise of sustainable concern. To be cruel (but honest), this building, which I admire, reminds me of every handsome move an architecture student *not concerned* with environmental performance wants to make.

Murcutt's extraordinary work may be the exception to this general observation. In that first generation of Italian Renaissance painters there were rare exceptions too, like Masaccio. But the interesting severity – and, in the long run, limited consequence - of Masaccio's work [figure 7] points to the difficulty of translating Murcutt's oeuvre, since its demanding ground rule is the absence of air-conditioning. My larger point is that if you look across the front line of architects working in this first generation that is broadly (versus locally) grappling with sustainability, you primarily see adoption and inclusion of technical considerations into normative pre-existing aesthetic models. Not *new and improved*, just *improved*.

What then is the radical aesthetic potential of sustainable performance when not considered as technical proof of existing formal policy, but as a transformative aesthetic ideal? For architects, this might not seem the central focus of sustainability (or LEED), but it is indirectly, and perhaps *should be explicitly*. Architects are not, after all, the primary go-to for quantitative performance: engineers are. No, architects remain purveyors of *value*, that binding agent between the qualitative and quantitative. The question seems straight forward enough. No substantial technological change comes free. So, to re-pose the question: what is the radical aesthetic consequence of the cultural desire for sustainable performance? Is it something that expresses itself in a set of formal rules, like the Modern response to the development of the steel frame? Or is it something – because it is essentially about performance – requiring entirely different means to fruition?

Well, as with uncharted territory: *here there be dragons*. By way of example, I have friends who seek to cattle ranch sustainably in Texas using native grasses without fertilization, irrigation, manual re-seeding, or the importation of hay. Calculating the site's bearing capacity has proven an extraordinarily complex undertaking. Because cow manure carries coliform bacteria that pollute waterways (like Giardia), the grazing land first had to be set apart from the stream (and partly re-graded), and the water supply for the cattle moved from the stream to a single tank (supplied in part by collected rainwater) central to the fields. The cyclic rotation of the cattle required entirely re-fencing the ranch into a pie-like configuration around this

water tank. The bearing capacity of the various pie-slice fields - the animals left off of each long enough to allow native grasses to re-seed - had to be considered with regard to a series of variables including solar exposure, gradient, soil type, drainage, etc.. The various pieces of the pie had thus to be differently sized, even though the same (still unknown) number of cattle were going to be run.

Because of this layout, an additional complicating factor was that each field would be grazed at a different time of year. Since the presence of bacterial coliform in the stream was one critical parameter of success, the amount of polluted sheet flow runoff from grazed fields had to be calculated against the capacity of the ever-dwindling grass to retain this flow against variables of temperature, rainfall, grass growth cycle, and the likely location of cattle. This turned out to be the killer calculation, attainable only by trial and error. I was speaking with my friends about some architectural design work during these complex calculations, trying to figure out their definition of beauty. One of them put it to me pretty succinctly. “When the coliform count in the stream is high, the ranch is ugly; when it’s low, the ranch is beautiful.” This was followed by a backhanded assessment of the value of architectural form: “It could be just whatever you want.”

This story nicely encapsulates the terrifying prospect of the central and profoundly radical potential of the aesthetics of sustainability: at its heart is an *invisible trigger* – like that coliform count - *without apparent formal dimension*. Moreover, this trigger is not pulled by any of the formal means by which we currently give value to buildings - “it could be just whatever you want.” You can prove this nicely by means of a simple experiment with school children [7]. Hold up an *I-Phone* in one hand, and a copy of *Cradle to Cradle* in the other, and ask: which is the more beautiful design? They will say: *I-Phone*. No surprise here since, frankly, *Cradle to Cradle* is pretty homely [figure 8]. But if you explain the radical technique by which the book was conceived and made - how it is entirely reusable – as opposed to the horrifying environmental consequences of mining for the rare earth metals needed to make the *I-Phone* so damn sexy, they will change their vote in surprisingly impressive numbers: now the book is beautiful, the phone less so. It’s possible, being the coming generation, that they get the clean underwear idea of the book, or at least see its fuzzy outlines.

That itself does not mean *Cradle to Cradle* is, as a designed object, beautiful, only that it is *not ugly*. It *might be precursory to beautiful,* like looking at a proto-typically early peripteral temple without having yet seen – or being able to see - the coming Parthenon. Or not. It might just be, as I suspect, an *Ugly Pet*. What I mean by Ugly Pet is something that, while ugly by normal aesthetic parameters, becomes beautiful because of the extraordinary amount of care and effort that has gone into seeing that thing to maturity, like nursing a sick cur from the pound to health, and finding you love the damn thing, and find it pleasing to the eye. Here,

beauty is conditional rather than universal, and exists in the eye of the beholder, rather than broadly. Oddly such beauty is readily explainable (it actually *requires* explanation), as it is with *Cradle to Cradle*, and once explained, sharable; though imagining the future of aesthetics as only a set of experiences that occur after explanations is deeply disheartening. Perhaps the best current built example of an Ugly Pet commensurate with *Cradle to Cradle* is the *Loblolly House* [figure 9], by Kieran Timberlake, about as homely a well-intentioned construction as is imagine-able, something, in terms of aesthetic dimension, that only a mother could love (I say that with admiration).

I don't lever this criticism because of the patent lack of formal richness at the Loblolly House. Formal sophistication is not, as noted with the San Francisco Federal Building, the issue. As interesting a construct as the aesthetics of an Ugly Pet might be, there is a missing potential for challenging or enlightening or transcendent - rather than default - aesthetic experience. Still, one senses *potential* in both the book and the house, without yet knowing the terms (that is what I meant about an idea being so conceptually beyond any norm that a new mindset is required to understand its implications). If you believe, as I do, that the aesthetics of sustainability are as yet fundamentally unexplored, then this sense of a possibility is doubly frustrating. Beyond the invisibility of the aesthetic trigger, here there are vague implications of a powerful aesthetic revolution for which there is, unlike many such changes - as from *Abstraction* to *Representation* and back again - almost no predictable trajectory. This is so because the history of artistic production in which the aesthetic response arises entirely from invisible qualities rather than formal manipulation is remarkably sparse. There isn't really a comparison set, a pattern, or a theory one can latch onto for answers.

That said, it is not an *empty* history, and, weirdly enough, the concept has a few singular masterpieces. Of these, the most familiar (in academic and cultural discourse it remains un-flushable) and usefully notorious is *Fountain*, by Marcel Duchamp [figure 8]. Prior to being an artwork, *Fountain* was of course, a urinal (there were four versions), never flushed, turned on its back, and visibly signed by Duchamp, though not using his own name. *Fountain* was not, of course, conceived with sustainability in mind, but what it shares with the potential for sustainable aesthetics is pretty startling (and for the following breakdown I am indebted to William Camfield's Marcel Duchamp Fountain [7]). Very briefly: *Fountain was intended as a test of principals, challenging an existing orthodoxy not merely of taste, but of valuation. Here the terms of aesthetic understanding do not arise from form alone, but from the relationship of form to a constitutional valuing act that is essentially invisible. Most powerfully, with Fountain, the potential for an aesthetic arises from an essential indifference to aesthetics.* Is there any other consciously made object out there closer as an analogy to how a sustainable construction could potentially operate aesthetically?

Where *Fountain* differs from the examples of sustainable constructs I've given is in the specific character of invisibility of content as an *empowering* aspect of the object, rather than more information. That is, its constitution adds friction to its fact, extending its aesthetic consequence in the direction of *rich ambiguousness and uncertainty, requiring individual rather than collective assessment.* This is simply something we do not yet see in the designs of this first generation. Curiously, one reason for this may be an insidious aspect of what I will for better or worse call the "culture of sustainability", with its insistence that the products of sustainable design must serve to *educate*. The aesthetic ideal of the *readymades* – and works that traffic in the same hidden dimension, like Sherrie Levine's great and truly upsetting photographs of photographs [figure 11] – point quite precisely away from the possibility of a construction serving to educate *towards anything agreed upon* (like "protecting the environment is good") by means of its aesthetic dimension.

I'll close here with two quick thoughts. If the aesthetic potential of sustainability is in its infancy, still, we can make out from *Fountain* and the Levine photographs two probable requirements for aesthetic engagement in the coming generation of architecture. First, as with *Fountain*, some aspect of a construction's inhabitation will require that the manner by which we experience meaning is set on its head. This may be as simple as the manner by which the great skylights of Williams and Tsien's *Cranbrook Natatorium* (which are commonly open to the sky to continuously balance the heat load in the building) perversely and pleasantly upset the proper definition of inside and out [figure 12]. And second, as with the Levine photographs, the actual act of making may end up playing a far more instrumental role in how content inheres directly in form. To date this possibility is most tellingly seen in Zumthor's *Bruder Klaus Chapel*, its formwork burned and sold for charcoal [figure 13]. Zumthor carries the burden of the environment quite painfully, and his work may well in retrospect be the hinge in this story.

Notes

1. John Szarkowski, Looking at Photographs (New York: Museum of Modern Art, 1973), p. 20.

2. Ibid, p. 66.

3. William Camfield, Marcel Duchamp Fountain (Houston: The Menil Collection and Houston Fine Arts Press, 1989), p. 21-61.

4. A recently successful path to widely read publication has been to take a simple technical invention – the toothpick, pencil, the screw – and explain how Western civilization could not exist were it not for this technical marvel. That this approach is beginning to feel tired may indicate a sea change.

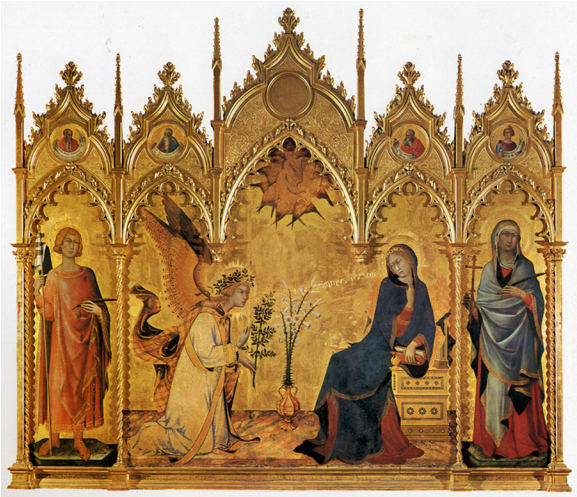
5. Every time I hear the terms *Modern* or *Mid-Century Modern* today used longingly by architects, Karl Kraus' great aphorism comes to mind: *Sentimental irony is a dog that bays at the moon while pissing on graves.* [1909, quoted here from Harry Zohn, ed., Half-Truths and One-And-A-Half-Truths: Selected Aphorisms (Chicago: University of Chicago Press, 1990) p. 63].

6. I most recently asked this question to a group of high school students in the deepest rural area of the Rio Grande Valley (at the Elsa Edcouch High School), and had precisely the response described, though there the pollution of groundwater is a problem that presses in on the health of everyone in the community so directly that I should not have been in any way surprised.

7. Camfield, op.cit.

Figures

1. Simoni Martini, *The Annunciation*, dated 1333
   Tempera on panel, 184 x 210 cm
   The Uffizi Gallery, Florence



2. Fra Angelico, *Annunciation*, ca. 1432-1434
   Tempera on panel, 175 x 180 cm
   Museo Diocesano, Cortona

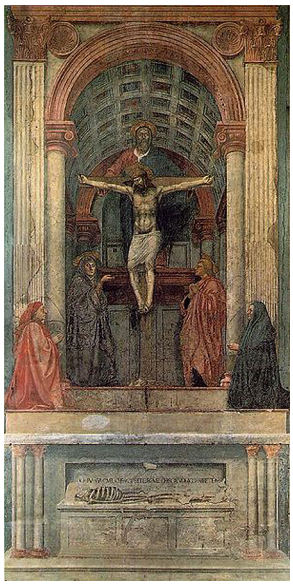
3. Leonardo DaVinci, *Annunciation,* ca. 1472-1475
   Oil on panel, 98 x 217 cm
   The Uffizi Gallery, Florence

4. Henry Peach Robinson, *Sleep*, 1867
Collodion process photograph
Royal Photographic Society, London

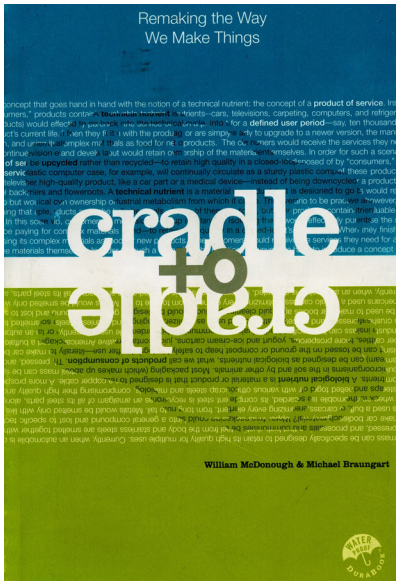
5. Jacques Henri Lartique, *Avenue du Bois de Boulogne, Paris*, 1911
Gelatin silver photograph, 11 5/8 x 15 5/8 in
Museum of Modern Art, New York, gift of the artist

6. Morphosis, *San Francisco Federal Building*, 2003
San Francisco, California
photography copyright Tim Griffith/Morphosis
image source: New York Times, 2007

7. Masaccio, *Holy Trinity*, 1425
Fresco, 667 x 317 cm
Santa Maria Novella, Florence



8. Cover, *Cradle to Cradle*, 2002
New York: North Point Press
text by William McDonough and Michael Braungart
design by Janine James / The Moderns



9. Kieran Timberlake, *Loblolly House*, 2006; Taylor's Island, Maryland
photograph copyright Stephen Kieran; image source: worldarchitecturefestival.com

10. Marcel Duchamp, *Fountain,* 1917
Photograph by Alfred Stieglitz; From *The Blind Man*, No. 2 (May 1917)

10. Sherrie Levine, *After Walker Evans: 2,* 1981
gelatin silver photograph, 3 ¾ x 5 1/16 in; photo source, Metropolitan Museum, New York, online

11. Tod Williams, Billie Tsien and Associates, *Cranbrook Natatorium*, 1996
Bloomfield Hills, Michigan
photograph copyright Michael Moran

12. Peter Zumthor, *Bruder Klaus Chapel*, 2006
Mechernich, Germany
photograph copyright ratibo
image source: panoramio.com