

Has Architecture Lost its Bearings?

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Abstract: The talk starts with some remarks on the meanings of the word "bearing" as demeanor, relevance, orientation, and center. Then it talks about three changes that are decreasing the bearing of architecture. They are (1) the diminished central role of the architect in the building process, (2) the fragmentation of communities which decreases the importance of central buildings/monuments, and (3) the growing dematerialization of buildings, both in the sense of turning buildings into screens, the invasion of digital links to other real and virtual spaces, and smart buildings. These trends reduce hierarchical unities in the planning, meaning, and inhabitation of buildings, and favor parataxis over syntax. Architects now have to be creative and adaptive in new ways, seeking new spatial and social forms and grammars.¹

The word "bearing" has many meanings. We start with orientation, as in "we lost our bearings, we're not sure which way we are heading." Architecture today seems to be heading in all sorts of directions. In a global economy with multicultural demands and myriad sources of funding, that is not surprising.

There was a question posed in the call for papers for this conference: "Is architecture constituted by its history or by an a-temporal, formal structure?" Like many philosophers today I am skeptical of essentialisms that push diverse phenomena into one restrictive set of necessary and sufficient conditions, and today's architectural scene is quite disjointed and multiple. Yet there is a *prima facie* continuity in architecture, which always appears to be doing the same thing. And architecture pays attention to and uses its history more than many other arts and crafts. We are in an important ways doing the same tasks that Greek and Chinese and medieval builders did. But we are doing them in a new context with new meanings, and our tasks are not quite what theirs were.

Perhaps we could say there is the continuity of a process, described very abstractly. For instance: architecture might be said to be the construction of

¹ My thanks to Martin Donogho for perceptive comments on an earlier draft of this essay.

spaces that we move through and live in, and which embody various social meanings. That's not a foolproof definition but it goes some way; and it is general enough that we can see how its embodiments might alter as social meanings change, bodies change, modes of living change, as well as with changes in the methods of construction and the institutionalizations of the building process.

Another of the questions posed in the call for papers was: "Is architecture always the re-presentation of other content, or does it create its own meanings?" Hegel said that architecture assembles brute unmeaning matter into structures that receive their purpose and meaning from outside, from the social practices and values that surround buildings. (This is in distinction to, say, poetry or painting, which work with parts already possessing their own meanings.) So Hegel would argue that architecture is always presenting or embodying other content. It may not be a RE-presentation; it could be a first embodiment, but the meaning comes from more than the arrangement of stones and wood.

To be a bit more precise, we can distinguish between causal effects and social meaning. If, for instance, you go from a narrow closed space to a large high open space, there is a feeling created by the sequence of spaces. Similarly if one moves from a chaotic space to a harmoniously proportioned space. This is partly cultural, but largely determined by our biology and evolution of our perceptive faculties.

These and many other spatial sequences are architectural effects, and architects learn how to use them artistically, as a painter learns how to use color effects. But these effects do not in themselves produce social meaning. The effect of moving from a constricted to an expansive space can be brought to bear with different social or individual meanings in a church, a civic building, a fun house, or a private home. These effects have different meaning and impact as society and technology change.

I want to talk about three of those changes, asking how architecture takes its bearings in an increasingly complex environment. The 1st trend is the loss of

centrality; the 2nd is the fragmentation of communities; the 3rd is the dematerialization of buildings. These trends lead to more juxtaposition and less centered or hierarchical unity: in the design and building teams, in the community of users, and in the building's functions, spatial unity, and social uses. Does that mean *less* unity or *new modes* of unity, or perhaps *very old* modes of unity?

Centrality

First, the loss of centrality. And that in two senses: the central role of the architect, and the central role of at least some architectural works in our social/cultural life.

Another meaning of "bearing" is a person's demeanor. We speak of regal or military bearing. Here are some photographs of people showing their bearing, their style of holding themselves in the world. Here is FLW with an authoritative demeanor. Here is Mies looking haughty.

That look is not so common nowadays, because the architect is not as much in control. Developers bring their own ideas, and constraints, and their own engineers. At times the architect is reduced to decorating the surfaces of preplanned efficient boxes. Even if the architect is able to manipulate the interior spaces and massing of the building, the program is constrained by financial factors and other specialized members of a team that has no one center.

There is also "bearing" as relevance and importance. You might say that the architect cannot adopt the regal demeanor of Wright or the haughty demeanor of Mies because architectural works have less bearing on the larger social and financial processes. There are flows of capital, and of people and ideas and symbols and goods and brands: the architects ride the waves.

You could argue against what I just said, by citing the current system of heroic international star architects. Often the star is asked to design a central symbol or monumental facility: capitals, museums, concert halls, libraries, stadiums. Such works are at least advertised to be central to the social life and

identity of a city or region. Sometimes they succeed at this, but too often they result in clones or self-aggrandizing monuments. The buildings enter a self-reinforcing cycle of celebrity rather than having a significant bearing on the society.

You could on the other hand argue that where the architect is most central is in domestic architecture, which is less dependent upon other teams and professions, and may well have a client who is more open to experimentation. It is true that there is more freedom in domestic architecture for private patrons, but while as a sector domestic architecture is crucial to identity and culture, any individual home is less so. Most of the innovative houses celebrated in architectural publications remain one-time wonders, notable because they depart from rather than because they change the direction of homebuilding.

Back, then, to bearings. A "bearing" is also that part of a machine which smoothes out friction and allows shafts to turn and wheels to rotate. These bearings are at the center of motion. We can sum up the last few points by asking to what extent are architects and their works at the center of building and public life.

As for the architects, it's getting quite crowded near the center. The architect has to share control of projects with hordes of other professionals. As for architectural works' bearing on social life, expressing and realizing that part of the social machine around which everything turns, is there a single center for the social machine?

Fragmentation

This leads to my second trend: The fragmentation (to put it negatively) or the multiplication and enrichment (to put it positively) of communities.

Martin Heidegger says that it's the task of architecture to "gather" and "open up a world", and to help create the unity of true dwelling on the earth. In his examples of the bridge in Heidelberg and the Greek temple, he sees the physical structures as unifying and bringing together different social trajectories

of action, and holding open a horizon of possible actions and values, as in the case of the bridge, and by the practices, central values and images affirmed and realized in and around the temple.

Architecture provides orientation by creating/opening a practical, meaningful space that allows strings of actions and movements and social roles to be gathered into a unified horizon of social meaning and value. Taking off from Heidegger, Christian Norberg-Schulz and especially Karsten Harries argue that a true community needs to have a place where it celebrates and recognizes itself, its history, its natural setting. This central gathering need not be a temple or a cathedral; it could be a theater, or a park, or a civic building, or a plaza, or some mundane building, perhaps a general store, around which people gather and values are affirmed. There should be a place where the community finds its unity. If that seems lacking, they think that is a loss for us. (Although Harries is well aware of the potentially restrictive and oppressive nature of highly unified communities.)

Not all architectural products fulfill what they declare to be the highest calling of architecture. A bicycle shed, for instance, does enable or gather together a set of practices, but these are not so central to the identity of the community. Though this might depend on the community; a bicycle shed in some towns (such as Eugene or Portland) might become a place of central affirmation. That would result, though, from changes in the social context, not in the design of the building. So, the claim that true architecture gathers a community's central mode of being bases the distinction between true architecture and mere building upon a second essentialism, the identity of the social world's horizon of meaning and practice.

However, both Heidegger and Harries speak of relatively homogeneous communities: the agricultural village, the New England or Bavarian town, the Greek city, all perhaps imagined as more unified than they actually were.

Compare such communities to the multi-centered flow in the large cities today. From Jane Jacobs to current boosters of return to the central city, one of

the claimed advantages of urban over rural or suburban living has been the richness and complexity found in the juxtaposition of different, perhaps opposed, sub-communities.

There is an analogous multiplicity in the suburbs, too, except that there, if you traced the activities of groups of people, you might find an interpenetrating net of paths limning archipelagoes of places, where various sub-communities do their shopping, worshipping, and recreating, but without constantly encountering each other as a whole suburban community. You would find monuments commemorating wars or local heroes or celebrities, but with different sub-communities interpreting the monuments in conflicting ways, perhaps protesting the monuments' existence. Supposedly common centers, such as libraries, stadiums, or civic buildings get strung out among complex class and cultural divisions

We might then lament that cities, in one way, and suburbs, in another, have lost the kind of unifying center that Heidegger and Harries celebrate.

But is this bad? Already in the nineteenth century Hegel saw society as made up of segments with rather different "spirits": rural landowners and farmers tied to the land and its values, bureaucrats tied to duty and process, capitalists with market concerns and international connections, workers in their various guilds, church and academic functionaries, the poor who are without skills. These segments do not share any unified set of folk values. But they do participate together in a modern system of law and equality. In addition they should have some allegiance to their nation as a political community with its own distinctive French or Italian style. But that national character is always being eaten away by the partial spirits of the different sub-communities. The unity of the nation comes about through and in dialectical relations among groups with different approaches to the world. It's the job of the political system to balance and unify these. There is no central monument in Hegel's state, except perhaps war memorials and parliaments.

In short, Hegel would say that spirit has moved on from the kind of unified community Heidegger and Harries celebrate. In this new modern society the architects' task may be to "gather" in a new sense.

If we ask what architectural product now gathers us -- *all of us*, city and suburban dwellers, all of us, not just people who go to museums, or to stadiums, -- what brings all together today, we might say shared infrastructure, and malls and train stations and highway systems and airports and tourist resorts: these are where people come together from different sub-communities with different histories and different values.

But, when they enter these places they become in some ways less than they were outside. As they enter they are defined as drivers or consumers or holiday-makers or passengers. These are real but thin social roles; they don't have the deep history and value content that Heidegger and Harries want to celebrate. These places abstract from, rather than incorporating, the richer identity you may have as a person with your unique birth and trade and religion and interests.

If you define a place as gathering and ratifying deep identities, then those I have just mentioned are not places. Indeed the French anthropologist Mark Augé describes them as 'non-places'. Such non-places are, however, fully real social places in the sense I describe in *Sprawling Places*. But they provide only a thin functional identity shared with people who have different deep identities.

So are the architects now to design non-places like these? They do so. Over and over. In his discussion of Bigness, Rem Koolhaas points out how the sheer size of some of these buildings "can no longer be controlled by a singular architectural gesture" (Koolhaas 1995, 494f). Such a building's mass or extent can make a single architectural gesture look tacked on or overblown (as in some malls). So an attempt to have the building gather up a community's single identity can make that identity look pretentious or ironic.

More importantly for my theme of juxtaposition, Koolhaas sees the elevator as disrupting architectural continuity and producing abrupt "mechanical" rather than "architectural" connections between separate modules within a structure.

A building with such separate modules can have its exterior and interior "become separate projects." The disjunction between inside and outside programs relativizes any asserted identity; if asserted only on the outside it is undermined by the varying inside modules. If asserted as one of those inside modules, it is undermined by being only one of many. If asserted as a decorative theme inside everywhere, it will be something that is seen as changeable.

So such buildings push what are supposed to be deep identities toward thinner social roles, seen as contingent and changeable, like joining a club. Such an architectural work may claim center stage by its size or showiness, but it will fail at the central gathering Heidegger and Harries seek.

Our built landscape is less and less oriented to a Center, but juxtaposes places for different deep identities, along with shared places that join us in thinner more abstract social roles that do not offer so much for architecture to celebrate.

Dematerialization and Juxtaposition

Hegel thought that the most harmonious form of architecture, where inner and outer meshed most perfectly, was the classical architecture of the Greeks and Romans. He thought that classical architecture expressed best the basic function of resisting gravity and supporting a space for social use.

In classical architecture the brute stuff, stones and wood, is arranged in columns and arches and walls that resist gravity in the most expressively self-conscious way. A column only supports, a peaked roof only covers, a non-weight-bearing (that word again!) wall only surrounds. The whole comes together in harmonious proportions to show human reason and creativity and house human social life.

If we take up the idea that resisting gravity is *a* or even *the* central task of construction, then certain things follow. Resisting gravity demands that the building have a solid foundation, and the building needs heavy parts that rise up

from that foundation in a unified system for bearing weight and elevating a roof over social space. The building needs to be a well-founded system.

A word here about philosophy: Philosophy could seem to have lost its bearing these days, in the sense that it has less influence or relevance. At least to many outsiders, and to some academic administrators, philosophy has lost its centrality for education. We see university departments being threatened with closure under financial constraints, and professional philosophers struggling to deal with new modes for less specialized communication.

One of its problems is the perennial disagreement among philosophers. Yet despite its fractured existence, philosophy usually holds out a goal of systematic unity. And it sees architecture as a metaphor for its systems: philosophers speak of the architectonic of systems of thought that rest upon foundations and build firmly to support conclusions. This is not the only model for philosophy and it has been questioned lately. But it has been very influential and the parallel with architecture has provided a metaphorical guide for searching for foundations, supporting conclusions, strengthening weak links in a system, and so on.

Then the philosophers feed back into architecture the ideal of the systematically unified building with the firm foundation and every part contributing to the overall unified system. Recall Aristotle's doctrine that in a work of art every individual part should be necessary to the total effect, so that if one part were disturbed the whole would be altered or weakened. That provides a powerful guide for architecture.

But if we look at the metaphor and that ideal more carefully we realize that they are misleading.

A building does have to resist gravity. But there are other forces as well, wind and earthquakes and fire and flood and hot and cold and the daily wear and tear of use, and the building has to deal with all these too. There are many forces needing many kinds of reinforcement against many kinds of threats, and many systems for heating and cooling and ventilating and electricity and water that have to be mated into the building. These are separate systems that may

have little or nothing to do with each other. Buildings have never been as hierarchical or as unified as the metaphor taken from them suggests. A building is not a totally unified system but rather a juxtaposition of different systems. The heating or plumbing or wiring of a building might be replaced without changing the rest of the building.

A building may offer a very unified lived experience of its spaces, but be a congeries of diverse systems whose independence is covered over. Or a building could be constructed of a deeply unified set of systems and yet be an aesthetic jumble. The two kinds of unity (causal and aesthetic) are separate from one another. How something works and how it looks are not the same. Designing the ductwork is a causal-mechanical problem; deciding how to reveal the ductwork well is a choice among aesthetic alternatives. Architects are trained to bring together causal and aesthetic issues. Philosophers are trained to bring diverse questions and types of language together. In both architecture and philosophy there is a dream of a hierarchically unified and well-founded system. And this is questionable in both domains.

The architectural ideal of foundation and support is weakened in another way, for a building does not always need to stand up resisting gravity: think of the cave dwellings in Cappadocia, where construction consists of hollowing out rather than building up.

Then, and especially, think of architecture where gravity is absent. Imagine constructing habitats in orbit where what you build does not have to resist a pull of gravity downward but does have to resist the outward force of air pressure in all directions, and where a building can expand in three dimensions in an organized or in a most disorganized way, with tight or loose links between parts that connect but do not support one another. There is architecture, but without gravity or foundations, where there is no one-way support but instead there is mutual aid in all directions. Philosophy too plays with this different ideal.

Closer to earth, think of pneumatic inflated buildings for fairs and shows, and then buildings whose walls have become screens, where the resistance to

gravity happens but is not *shown* at all. Think of Venturi's old Las Vegas where buildings become signs. And Jean Nouvel's buildings with walls as screens. And buildings whose walls become illuminated screens.

But the dematerialization of architecture can go further; so far we have talked about buildings that are still made of brute stuff, but which no longer express their resistance to gravity. Instead they turn their walls into images and screens; but this is only the first step in the approach of the digital.

I am not talking here about cyberspace as another world, as described by William Gibson or Neil Stephenson. What interests me here is not migration to a netherworld but the juxtaposition of plural worlds, in the production of mixed places and buildings.

It's becoming common nowadays for academic departments to interview job candidates using Skype. In effect this joins the space where the interviewer sits with the space where the interviewee sits. If the video were presented not on a small screen but on a wall-sized screen, as is done in some professional videoconferencing sites, then the feeling that the two rooms are two parts of one space becomes very strong. This is mixed reality, where two physical spaces are juxtaposed by digital means. We could imagine a suite of offices where each room was in a different city but was connected to the others.

Both spaces need not be physical. A physical room could have one wall open out into a virtual world, perhaps a virtual committee meeting room, perhaps a fantasy landscape. My house could have extensions, some of which are to purely virtual spaces, some to other physical spaces. There would be abrupt transitions among these juxtaposed spaces, and the linkages might change rapidly.

We are also beginning to see augmented reality, as in the recently proposed Google glasses (and some apps already available for the iPhone) that label things as we look at them. This is another mixed reality and it could be adopted for architectural purposes. In the extreme case, suppose, your room could be quite

bare, but your glasses painted the room with a special decor (and changed it as you wished or according to your mood or purpose).²

In mixed and augmented reality we don't have two separate worlds, but the mixture of digital and physical simply becomes *the* world. "The Internet to us is not something external to reality but a part of it: an invisible yet constantly present layer intertwined with the physical environment" (Czerski 2012).

Mixes of virtual and physical challenge the architect in ways similar to Koolhaas' Bigness. Beyond a certain level of connectivity, a building becomes a web of juxtapositions that can no longer be controlled by a singular architectural gesture. Even more than elevators, digital connectivity and imaging establish abrupt juxtapositions between different geometries and spaces. And a façade can no longer reveal all that happens inside; interior and exterior architectures can become separate projects, or both join in the instability caused by multiple programs.

There are still further challenges coming along. For one thing, just as the production of music or video can now be done on a small scale at home, the production of decor and architectural effects by digital means will become an amateur possibility. You could download apps to change the decor of your room, or link you with your partner's office. This might lead to a renewed emphasis on scenography, which might stimulate new reactions toward abstraction.

But buildings will also be dematerialized in yet another sense, because that brute opaque stuff is beginning to talk back, to be intelligent on its own. Sensors in concrete beams and joints are already reporting on the structural strength of bridges; soon a building will be able to indicate its needs for maintenance. Buildings already can react to changes of temperature and lighting. Maria Lorena Lehman points out that with additional sensors in furnishings, and perhaps also

² For an extreme example of projected decor, see Norman Spinrad's *Riding the Torch* (1978), and for pervasive augmented reality, see David Brin's *Existence* (2012).

in the inhabitants' clothes and tools, a building could adapt itself and work to adapt its inhabitants' behavior.

As technology becomes smaller and evermore mobile, sensors are being embedded everywhere. This means that those objects which you use every day will be able to convey data about the way they are used. . . . a smart building can use its systems to detect patterns and form inferential decisions that impact the building's behavior. . . . make the necessary environmental changes to qualities like its temperature, lighting, and acoustics. Also, occupant stress levels could be determined that could help an environment to regulate itself in an effort to lower such stress levels. . . . such smart architecture can form a better relationship with occupants by engaging with them in more meaningful and timely ways. . . . By analyzing and responding to data being gathered from objects within an environment, smart architecture can proactively take part in a building's occupant activities. . . . If an occupant needs help engaging in any type of behavior change, a smart building can help by providing just-in-time design interventions. (Lehman 2012)

Such a paternalistic smart building will have come a long way from Hegel's brute material with externally imposed purposes.

As buildings and the objects in them get smarter and the buildings have a larger repertory of behaviors to offer, architects will need to extend designs over time, as circulation patterns become more complex temporal choreographies. There will be new tools for architects to employ.

Or, *someone* will employ those tools. Programmers and marketers will be trying to set parameters for the architects. Again, there will be rivalry for control and design. Who will program the programmers? And what happens when different smart systems get juxtaposed? What if the system that controls sunlight and temperature disagrees with the system that is monitoring your moods?

Eventually, the embedded computers might even get into self-programming. David Brin imagines computers with access to personal data acting up: "Air-traffic computers began rerouting flights to where they figured

passengers ought to be, for optimized personal development, rather than the destinations embossed on their tickets" (Brin 1998).

So as buildings are dematerialized they again lose their centered unity and become juxtapositions of different spaces.

Am I then forecasting a hi tech future, magnified versions of early Rogers and Foster, buildings with exposed bones slamming screens and smart materials in your face? No, but the technical tools will be available. Admittedly, such dematerializations will affect only some buildings. Others will be built strongly opposed to linkage and smart transparency. But the digital and the virtual and smart materials are likely to be tools increasingly brought inside even self-consciously material buildings such as Herzog and de Meuron or Tadao Ando can build.

Think of the most recent Pritzker Prize winner, Wang Shu, who is praised for reusing and renewing old materials and older Chinese building patterns, but also for mixing them with today's uses and technology. What is important is fitting things together, finding new modes of unity within and among the juxtaposed old and the new.

The capabilities for digital and smart buildings will be out there. Architects will come to see them as tools that help in dealing with, among other things, environmental and energy issues. And as in the case of life-cycle analysis of building materials, architects will eventually have to justify why they are *not* taking advantage of these new technologies.

So where are we?

The first trend shows an increasing need for architects to cooperate with other professionals who may also be their rivals for business. Architects, who have already been fighting for turf with engineers and interior designers and decorators and landscapers and obstinate developers, will have to deal with image makers and game designers and the multiple programmers of intelligent systems, and soon with crowd-sourced amateur design and programming.

The second trend points out that The Center is disappearing; there is no gathering up the whole community in any deep historical identity. When we find large architectural works that do gather the community, they mostly do so only into thin social roles. But if we celebrate only thin social roles, our more substantive history and values get abstracted away, which increases the danger that everything gets reduced to consumption that maximizes exchange.

The third trend expands possibilities for the architect while posing new problems. Connectivity, the intrusion of the image and screen, juxtaposition with other physical and virtual spaces, intelligent buildings and objects with multiple smart systems, these bring challenges about how to orchestrate transitions among juxtaposed spaces, and manage conflicting rhythms over time.

Notice that these issues do not duplicate the old oppositions between eclectic and pure, modern and postmodern, or ironic and sincere. These issues are not solved by creating a new style; they will arise in any style.

Also, we should note that while the trends I describe are real, they depend on environmental and economic conditions that are fragile at best. For instance, the technologies in the third trend can help architects deal with environmental and energy problems, but those technologies themselves are vulnerable to disruptions in global trade and shortages of energy and materials that may result from more severe environmental or economic stress. On the other hand, under such scarcity the second trend, social fragmentation, could be strongly magnified.

My philosophical theme has been the move away from hierarchy, centers, and foundations, and toward juxtaposition. From syntax to parataxis. But my point now is that there is never only juxtaposition, never only parataxis.

Experiences are not simply juxtaposed isolated moments, now this appearance, now that. Experiences come linked over time, and they stand in contrasts to other possible experiences. If a juxtaposition can be experienced at all, it might be synthesized under established rules, or it might be suggesting

new contrasts and opening space for new concepts and new rules.³ The absence of established rules and "grammars" cannot stop new juxtapositions from bringing new possibilities for meaning and action. Even the most tightly regulated sets of rules (for formal logic, say, or the game of baseball, or for behavior in a courtroom) cannot control their borders. They can declare that "ungrammatical" combinations and actions are illegitimate, but they cannot stop them from generating new meaning and suggesting new practices. Juxtaposition, metaphor, transfer, change cannot be walled out.

I have invoked Hegel because he can discern mutual constitutive relations and mediations among what may seem merely juxtaposed concepts and entities, especially in social systems.⁴

Hegel's books are meant to show how the encounter with a single isolated item of experience, or the concept of a single determinate entity, or the freedom of an individual property owner, or the meaning of a single art work, only become possible within a tense skein of relations and mutual dependencies among experiences, more complex categories of thought, and social institutions. The innocent sounding idea I cited at the beginning, that "architecture assembles brute unmeaning matter into structures that receive their purpose and meaning from outside, from the social practices and values that surround buildings", turns out to be one piece of a complex vision of art and civic life as a self-interpreting process expressing itself in constructions. And as that process expands and deepens insight into what may have seemed accidentally juxtaposed, it is up to designers to capture those suggestions and invent new forms.

³ What is at stake here are the modes of unity and determinateness in conceptual and social systems, and this connects to issues about conceptual holism. Those issues go back to Kant vs. Hume on whether meaningful experience can happen based on completely unrelated and unconceptualized units of data. I have pointed at the Hegelian take on that issue, but it could also be traced down from Neo-Kantians such as Natorp, through Carnap, Quine, Sellars, and Hilary Putnam.

New modes of unity are needed for the decentered and juxtaposed design teams, for the juxtaposed spaces and functions in and among buildings, and for the new assemblages of sub-communities that do not come together around a common deep identity, but only in thin functional roles. Architects will continue to be stretched between applying formulas and opening possibilities through creating new forms and new modes of unity.

I'll end with Hegel talking in a relaxed mode, about the colonnades in the vicinity of Greek temples. Listen to the quote keeping in mind our issues about lack of centrality, community fragmentation, and changes opening new possibilities:

In these . . . single and double colonnades, which led directly to the free open air, we see people wandering openly and freely, individually or in accidental groupings; for the colonnades as such enclose nothing but are the boundaries of open thoroughfares, so that people walking in them are half indoors and half outside and at least can always step directly into the free open air. In the same way the long walls behind the columns do not admit of any crowding to a central point to which the eye could turn when the passages were full; on the contrary, the eye is more likely to be turned away from such a central point, in every direction. Instead of having an idea of a gathering together with a goal, we see a direction outwards the whole building is constructed for standing about in or strolling up and down in or coming and going rather than for assembling a collection of people and concentrating them there, shut in on every side and separated from the outside world. (Hegel 1988, vol. 2, p. 675f.)

Can we find our bearings in this open world?

⁴ I could have invoked Derrida's studies of the way social and textual "grammars" depend on their not having the absoluteness they claim to have, or on the relation of decision and policing to the fertility of juxtaposition.

References

- Augé, Marc. 1995. *Non-Places: Introduction to an Anthropology of Supermodernity*. London: Verso.
- Brin, David. 1998. *Stones of Significance*.
<http://www.davidbrin.com/stonesofsignificance1.htm>
- Brin, David. 2012. *Existence*. New York: Tor Books.
- Czerski, Piotr. 2012. *We, the Web Kids*.
<http://www.theatlantic.com/technology/archive/2012/02/we-the-web-kids/253382/>
- Gibson, William.. 1984. *Neuromancer*. New York: Ace Books.
- Harries, Karsten. 1997. *The Ethical Function of Architecture*. Cambridge: MIT Press.
- Hegel, Georg Wilhelm Friedrich. 1988. *Hegel's Aesthetics*. Two volumes. Translated by Malcolm Knox. Oxford: Oxford University Press.
- Heidegger, Martin. 1971. *Poetry, Language, Thought*. Translated by Albert Hofstadter. New York: Harper and Row, 1971.
- Heidegger, Martin. 1977. *The Question Concerning Technology and Other Essays*. Translated by William Lovitt. New York: Harper and Row, 1977.
- Jacobs, Jane. 2011. *The Death and Life of Great American Cities*. New York: Modern Library.
- Kolb, David. 1990. *Postmodern Sophistications: Philosophy, Architecture, and Tradition*. Chicago: University of Chicago Press.
- Kolb, David. 2006. "Real Places in Virtual Spaces," *Nordic Journal of Architectural Research (Nordisk Arkitekturforskning)*, 2006 no. 3, 69-77.
- Kolb, David. 2008. *Sprawling Places*. Athens GA: University of Georgia Press. Also a book-length hypertext at <http://www.dkolb.org/sprawlingplaces>.
- Koolhaas, Rem, and Bruce Mau. 1995. *SMLXL: Small, Medium, Large, Extra-Large*. Edited by Jennifer Sigler. New York: The Monacelli Press.

Lehman, Maria Lorena. 2012. *Sensing Architecture*,
<http://sensingarchitecture.com/8792/top-7-reasons-why-architecture-should-pull-information-from-objects/#more-8792>

Norberg-Schulz, Christian. 1985. *The Concept of Dwelling*. New York: Electra/Rizzoli.

Norberg-Schulz, Christian. 1984. *Genius Loci*. New York: Rizzoli.

Spinrad, Norman. 1978. *Riding the Torch*. New York: Bluejay Books.

Stephenson, Neal. 1993. *Snow Crash*. New York: Bantam.

Venturi, Robert, Denise Scott Brown, Steven Izenour. 1977. *Learning from Las Vegas*. Cambridge MA: MIT Press.