

“Form ‘Is’ to ‘ought’” or “The Meek Shall Inherit the Earth”

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“From ‘is’ to ‘ought’” or “The meek shall inherit the Earth”: Architecture, Philosophy and Avant-garde Practise

The central question posed (with a blush) in the following essay is whether philosophy can be said to provide a model for how we should build today, specifically in regard to avant-gardism. Avant-garde movements in art have been thought of historically as being about experimentation or revolts against tradition or more recently about works that move towards the total eradication of the current conception of the institution of art, thus raising the question “What is art?”, or returning art to its supposed original role of symbolizing ideas. In architecture this has been more problematic because architecture has still been concerned with the issues of dwelling and shelter.

In elaborating my question, if not answering it, I will discuss some ideas from on the one hand Heidegger and on the other Deleuze and Guattari, not as conservative and progressive thinkers respectively, but as two different kinds of progressivism. Heidegger has more often been employed in conservative stances, as for instance in Christian Norberg-Schulz’s employment of Heidegger’s notion of language as the “house of Being” to argue for the promise of “an authentic figurative architecture”, as in the work of Michael Graves.¹ On the other hand, Heidegger’s ideas about technology have been seen by some as out of tune with contemporary society: “It is time, perhaps, to forget Heidegger” argues Neil Leach.² Karsten Harries, however, uses Heidegger to support a progressive approach to architecture, in Heidegger’s terms, to search ever again for the meaning of dwelling, Harries even asking whether architecture can help us to find our place and way in today’s complex world.³ The task of architecture, he argues, is “the interpretation of a way of life valid for

our period”,⁴ it must represent or re—present rather than symbolise the era. Deleuze and Guattari argue, however, that the notion of ‘representation’ itself is dated. Indeed, Heidegger himself spoke of the modern age as one in which the world and its space is ultimately conquered as representation. The point here, as Heidegger too would argue, as would also ‘political’ thinkers such as Lefebvre and Foucault, is that the user’s space is lived, not represented or conceived.

Architectural theories can be somewhat incoherent in regards to the employment of philosophical justification, unless, that is, we start to talk of philosophy in terms of cultural *Weltanschauung*: a people act and create as they think. Also, the same philosophical position or philosopher has been used to defend different kinds of architecture: e.g. the influence of Nietzsche on both the Expressionists, such as Bruno Taut’s ‘Alpine Architecture’ and the anti-Expressionist views of Ludwig Hilberseimer quoting Nietzsche calling for the humanity of the future to be “square-built in body and soul”.⁵ Steven Holl, architect of Kiasma in Helsinki—a building whose name as well as its ‘chiasmatic’ form was ‘inspired’ by his reading of Merleau-Ponty—stated that “one grows from the misuse of philosophy... I have definitely misused the philosophical territory in a violent way. The phenomenologists want sense perception and experience, but as an architect that’s not enough.”⁶ But would Holl then agree that his words should have nothing to do with our experience of the building? Thus, Kiasma may be said to fail or succeed by how our corporeal response to it, in terms of our sensuous response to its materiality, transcends the conceptualising process, in terms of, say, symbolism and architectural-historical references or even the author’s design narrative. Or perhaps, as Merleau-Ponty said of painting, it has philosophical

significance in that it illuminates the structure of our perceptual relation to the world.

PHILOSOPHERS AND ARCHITECTURE

In recent years more and more philosophers have taken up the issue of architecture beyond the more traditional concern with aesthetics,⁷ yet many are seemingly paralysed by the difference between abstraction and the individual example, especially in their inability to talk about the present day, beyond, say, building types typifying the modern human condition: e.g. the non-identity of airports or avant-garde architecture as an event of the present. Philosopher John Rajchman, writing in 1998, in an attempt to “construct” a new space of connections in accordance with Deleuze’s notion of the ‘becoming’ or ‘virtual,’ states that the ‘virtual house’ is the one which in its plan, space, construction and intelligence gives the greatest number of new connections; but he leaves architects with his disparaging view that such a house is yet to be designed. As a philosopher dealing with what kind of facts are to be looked for and accepted in explanations, he is undoubtedly correct, but his comment also ends up dismissing the existing built environment as inadequate. Other philosophers fall back on art criticism practices, in seeing works as being ‘about’ something, about the human condition or, most often, as sites of criticism and alterity, for instance Derrida’s description of Bernard Tschumi’s Parc de la Villette in Paris as *folies* “destabilising meaning, the meaning of meaning, the signifying ensemble of this powerful architectonics”.⁸ Moreover, theory itself is seen as a form of alterity; as Deleuze argues: “A theory does not totalize; it is an instrument for multiplication and it also multiplies itself... It is in the nature of power to totalize and... theory is by nature opposed to power.”⁹ The argument for alterity also provides an ethical stance, though one which is questionable, in that, in the Kierkegaardian critique of ethics, choosing the guidelines for one’s life never makes any serious difference since one can always choose to rescind one’s previous choice.¹⁰

Modern society is often characterised as going through a radical transformation. “The city is no longer. We can leave the theatre now ... Relief it’s all over” states Rem Koolhaas.¹¹ Lefebvre might have agreed with him, albeit giving an emphasis to the connection between architecture and power: “The [building] facade (to see and to be seen) was always a measure of social standing and prestige.”¹² For Lefebvre, like Bataille and Foucault, the epitome of bourgeoisified space was the prison. Furthermore, architecture, even in the hands of a radical Modernist such as Le Corbusier, became, in

Lefebvre’s view, “a moral discourse on straight lines”... combining a figurative appeal to nature with the worst kind of abstraction...” Utopianism is now seen by many to lie in crisis, due to its failure to achieve the status of a science: in the 1920s Walter Gropius thought the new architecture was “not a new style, but a victory over every possible style”, a matter of “absolute rationality”. The information technology has created a crisis of identity which within late-capitalism has opened up new possibilities for design and architecture. The new global information society based on the logic of networks, has generated “spaces of flows” that erase relations between architecture and society, a liquid modernity where those in power are voluntarily nomadic and not bound to territories and those without power involuntarily. The new situation needs new imagery: and when structures no longer are fixed almost all problems could be called “design problems”. Juhani Pallasmaa, however, speaking out against current international avant-gardist trends (e.g. the work of Koolhaas, Hadid or Eisenman), argues that the tendency of such architecture today is to reflect a manipulated reality for the achievement of specific purposes. Further, architecture becomes aestheticised when it is detached from its existential foundations and turned into an entertainment. Moreover, “an avant-garde is no longer possible today as it is not possible to create a distance to social conventions, it is not possible to resist them. Due to the exploitative nature of capitalism everything sooner or later becomes part of the establishment.”¹³ Pallasmaa is offering cultural resistance to sameness and aestheticization, while someone like Peter Eisenman offers a ‘critique’ of tradition, destabilizing the ideas that buildings are containers of meaning.

VIRTUALITY

A number of philosopher-commentators on the work of Deleuze and Guattari have dealt with the issue of virtuality and architecture: for instance John Rajchman, Andrew Benjamin, Elizabeth Grosz and Giovanna Borradori. Architecture, unlike building, Benjamin implies, is never an ‘is’ but a ‘virtual’.¹⁴ This is certainly understandable in the sense of great art opening up further interpretations, but transferred beyond abstraction, to the realm of practise, we perhaps get the naturalistic fallacy and an ‘is,’ or rather a ‘virtual’, becomes an ‘ought,’ that is, ‘freedom’ by another name, or the infinite, a freedom of infinite innovation. There is an impulse from Nietzsche to consider here: for him the problem was to overcome scepticism, pessimism and nihilism: “The sense of Nietzsche’s philosophy is that multiplicity, becoming and chance are objects of pure

affirmation," writes Deleuze.¹⁵ Deleuze and Guattari's championing of Nietzsche's dictum "To think is to create... To think, to cast the dice" and their well-known idea of philosophy being about 'building concepts' strikes a resonance with the notion of 'design' as creation, as does their call to "think differently" and "constructing a real to come" with avant-garde practise.¹⁶ Nietzsche demanded an aesthetics of creation, an opposite of Kantian disinterestedness. Art does not calm; on the contrary, art is a stimulant of the will to power, the point being here to expose every reactive conception of art. Nietzsche wrote in 1878: "The less men are bound by their tradition the greater the internal stirrings of motives, the greater accordingly the external unrest, the whirling flow of men, the polyphony of strivings. Who today still feels a serious obligation to bind himself to one place? Who feels that anything is seriously binding?"¹⁷ For Nietzsche, all things reflect a state of forces. But, as Deleuze asks, why does the will to power need something, such as art, to excite it, when it needs no motive goal or representation? Because it can only be set up as affirmative in relation to active forces and to overcome reactive ones.¹⁸ The subject, too, is problematic: creativity and novelty cannot emerge from the cultivation of the subject because it always entails discipline, and discipline is a closing down of the possible desiring production, locking the subject into repetitive cycles of habit and morality. While Freud saw all artists as psychotics, Deleuze and Guattari see a true artist as a person who dips into chaos, bringing out the new.

Referring to both Bergson and Deleuze, Grosz takes this further in what she calls a posthumanist understanding of identity: "An openness to futurity is the challenge facing all of the arts, sciences and humanities; the degree of openness is an index of one's political alignments and orientations, of the readiness to transform."¹⁹ Architecture and in fact all cultural identities are put into question. Thus the motive for avant-gardism is the nature of reality itself. Instead of conceiving of relations between fixed identities, one has to look to the 'in-between', for Bergson the only space of movement or 'becoming', that which makes identities possible. In the new identity politics the in-between becomes the locus of futurity, movement and speed. In one of their few references to architecture, Deleuze and Guattari mention how in modern times reinforced concrete has made it possible for architecture to free itself from "arborescent" models of architecture (i.e. "tree-pillars, branch-beams, foliage vaults"): that is: "It is no longer a question of imposing a form upon a matter but of elaborating an increasingly rich and consistent material, the better to tap increasingly intense forces".²⁰ The appropriate building materials

don't yet exist to realise many of the current avant-garde schemes, for instance those that would ideally change form, evolve like living organisms. Yet this seems to me, just as with deconstructivism, with little fault of the philosophers (if not their commentators), to lend itself to naïve formalism — just as architects have taken to Deleuze and Guattari's distinction between smooth and striated spaces: that is, "all becoming occurs in smooth space" but movement is frozen by striated space.

Deleuze and Guattari accept that creation is necessarily paradoxical and problematic: "The 'problematic' is a state of the world, a dimension of the system, and even its horizon or its home: it designates precisely the objectivity of ideas, the reality of the virtual."²¹ But though Deleuze defines the context in which creation must take place as primarily problematic, his philosophy is still progressive and responsive to the environment. Indeed, the approach is very much pragmatic. Viewing knowledge as a tool for enriching experience, pragmatism tends to be pluralistic, experimental, sceptical of the notion that empirical knowledge can be absolutely proven, and naturalistic. Rejecting the quest for absolute certainty, it takes the attitude that human action sometimes can improve the world. All of experience, including human experience, the pragmatist argues, needs to be understood as an interaction between an organism and its environment. Deleuze and Guattari declare that multiplicity, more than a matter of logic, is something one must make or do and learn by making or doing: we must always make connections since they are not already given.²²

Architects such as UN Studio and NL architects have attempted to derive a method for the realisation of real projects based on principles derived from Deleuze's philosophy, such as, for instance, the use of the Deleuzian abstract machine of the 'diagram,' which doesn't represent anything in itself but constructs a reality to come, a virtual architecture, though the question remains of whether this 'virtual architecture' is not virtual in Deleuze's sense, but simply phantasmatic projections of real space. Caroline Bos of UN Studio articulates a theorising architect's point of view, arguing that the bridge between abstract thought and concrete production is provided on the one hand by techniques, technology stimulates mental fabrication by means of a specific potential that it possesses, and on the other hand by moving closer to the virtual,²³ the architecture of architecture which, it can be argued, also provides the building blocks for philosophy. Philosopher Giovanna Borradori, too, posits the challenge of the architecture of virtuality to explore new avenues over and beyond the articulation of form, and thus to abandon

all formalist stances and to take up perception as a response to the yet-unformed. This 'yet-unformed' is pure movement, a movement that comes before space in that it *constitutes* spatiality. Thus we get the so-called topological turn, the digital animation of form—the graphics of which look spectacular on the computer screen—in which form is no longer seen as architecture's ultimate parameter but rather as a by-product of the design process, a process which 'enables', so the argument goes, more participants (thus more 'democratic' and 'popular'), the form emerging from its own generative process. As architect Kas Oosterhuis sees it, architecture becomes animated and as unpredictable as the weather... displaying real-time behaviour... The building finally goes wild".²⁴ In a theoretical project for a *911_Ground Zero* memorial in New York, titled "Towards an Emotive Architecture", Oosterhuis and his partners proposed (an as yet absolutely unbuildable) building which would literally change form depending on the weather and the collective conscience of the passers-by: perhaps taking the form of the American flag on July 4th, "Christmas mode", "Gay Pride Day mode", and so on, and even taking the form of the two demolished towers on memorial day. Another example is Greg Lynn's Hydrogen House proposal for Vienna, in which a simple triangular volume becomes deformed in a process by solar rays and the shadows they cast on the building. The 'ethics' of such a design, the argument goes, is that there is a shift from a passive space of static coordinates to an active space of interactions, implying a move from autonomous and elitist purity to contextual specificity. UN-Studio's polemical icon for their new hybrid architecture is "Manimal", a computer-generated picture made from the hybridization of pictures of a man, lion and snake, but with its parentage left obscure. The icon emphasises that also architecture should include invisible contributors: 'Manimal' symbolises a post-humanism in which all possibilities merge.

TRADITION AND AVANT-GARDISM—HEIDEGGER AND THE AUTOBAHN

Using the example of the formalist attempts by Peter Eisenman to design buildings in some sort of accordance with Derrida's notion of deconstruction, Juhani Pallasmaa has argued that there seems to be a common confusion about the relation of architectural theory and the making of architecture, that avant-garde architecture turns into a mere medium for reflecting philosophical ideas.²⁵ To think otherwise leads to the infamous question of the author's own moral right to the interpretation of the work. Actually, it might even be argued that these buildings succeed irrespective of their references to philosophy (or theory generally) or the

author's intentionality, albeit that, for instance, Pallasmaa argues that Eisenman's architecture is not "material" at all, it never evokes images of matter, as opposed to say, Aalto's architecture, which is, in most cases, more an architecture of material than of form.

Pallasmaa's own positive references to philosophers such as Marcuse, Heidegger, Merleau-Ponty and Bachelard have to do with our experience of the built environment: "Authentic architecture is always about life; man's existential experience is the prime subject matter of the art of building." The role of philosophy for architects here seems to be remind us of our nature as world disclosers; that is, by means of our coordinated practices we human beings open up coherent, distinct contexts or worlds in which we perceive, act and think. Leading on from this, it should be mentioned that the philosophical tradition, however, differs from another long tradition, namely architectural knowledge, a type of thinking which doesn't require that architects begin from first principles. Pallasmaa continues: "To a certain degree great architecture is always about architecture itself..." The conceptual opening one could employ here is that of 'tradition', understood in Gadamer's sense:

"...our usual relationship to the past is not characterised by distancing and freeing ourselves from tradition. Rather we are always situated within traditions, and this is no objectifying process, i.e. we do not conceive of what tradition says as something other, something alien. It is always part of us, a model or exemplar, a kind of cognizance that our later historical judgement would hardly regard as a kind of knowledge but as the most ingenuous affinity with tradition."²⁶

An interest in theory or philosophy, then, might presuppose the disintegration of such a tradition or a radical transformation of society, generating a demand that practise legitimate itself: "Architecture and the home are contradictory concepts". Thus Pallasmaa might be suspicious of the formalistic coupling of architecture and philosophy in architectural practise, but he is not against avant-gardism in the sense of a strategy that alters people's perceptions, defamiliarising the familiar, or what he terms opening up a second realm of consciousness.²⁷

Heidegger may have had a penchant for the vernacular building of the Black Forest and he may have lamented at how the *Gestell* (framing) of technology in the modern age makes everyone and everything into a commodity sitting in reserve awaiting to be used up, but he also argued that technology was inevitable, a

part of the metaphysics of Western thought. It is something we will have to go through, though as yet we don't know what lies on the other side.

Karsten Harries doesn't see Heidegger's position as all gloom and Black Forest kitsch, and uses the seminal essay "Building Dwelling Thinking" to support a progressive approach to architecture.²⁸ Heidegger had the audacity to equate the Holocaust to modern agricultural production, and deconstructed the question of the severe housing shortage in the post-war years by saying that the real plight of dwelling lies in that man must ever search anew for the nature of dwelling, but that as soon as man gives thought to this homelessness, it is a misery no longer. He may have talked reverently about the Black Forest cottage but summed up by stating that this "in no way means that we should or could go back to building such houses; rather it illustrates by a dwelling that *has been* how it was able to build."²⁹

There's another example we could take from "Building Dwelling Thinking" to show Heidegger's understanding of change. In the essay he gives a few examples of bridges from various epochs, and elaborated how they reveal man's understanding of Being. While the first 'bridges' might be seen as simply trees fallen across the streams, Heidegger's own first example, however, comes from the Black Forest rural landscape, and then the mediaeval city bridge (specifically a bridge in Heidelberg), which leads from the precincts of the castle to the cathedral square. Finally, Heidegger talks of the highway bridge on the autobahn "tied into the network of long-distance traffic, paced as calculated for maximum yield." But Heidegger is not as condemning of the autobahn bridge as one might suppose. After going through the different bridges he continues:

"Always and ever differently the bridge escorts the lingering and hastening ways of men to and fro, so that they may get to other banks and in the end, as mortals, to the other side. ... The bridge gathers, as a passage that crosses, before the divinities—whether we explicitly think of, and visibly give thanks for, their presence, as in the figure of the saint of the bridge, or whether that divine presence is obstructed or even pushed wholly aside."³⁰

For the autobahn bridge, at least, the divinities are more likely pushed aside. With our conquest of distance we are threatened with the loss of nearness. The bridge is fitted into our everyday practices, in getting from A to B, it also opens up future possibilities for us. The sky manifests multiple possibilities as one goes about one's business and this, as part of the earth, is within our everyday concerns, though its gathering power on the

earth as a focal practice is undoubtedly weakened, yet while building new communities, for instance, on the internet, albeit to a great extent impersonal.

But there is a further impulse from Heidegger that we should consider here, and impulse which seems to lie at the heart, for instance, of Pallasmaa's recent thinking. In the essay "Art and Space" Heidegger argues that a work of sculpture takes place in that it embodies a place, thus preserving a dwelling place for human beings amidst things. Even the gods have left the temple, and technology takes over and occupies it as part of the tourist industry. But it can still work as a work of art in that embodies a dwelling place; but that we must learn to think the place that is *in things* rather than to think that things are *in a place*, a position in space.³¹

CONCLUSION

The present eagerness in avant-garde architecture to represent movement or even achieve actual movement in buildings can be interpreted in various ways: architecture which is more receptive not just for the (changing) human body, but also to intentionality and desire, reflecting real-time behaviour. But again, if the key issue here is both our sensuous engagement in the variable world, and a reduced subject-object polarisation in favour of a participant relationship, does this actually imply a required turning away from any representationalist 'Cartesian' architecture towards a literally organic architecture? The interest in Minimalism, at least, should counter such an idea, but again moreover seeing non-representationalism as being about lived practices not simulations of aleatory systems. Still, Jeffrey Kipnis has argued that chaos theory and mathematical biology are essential to the project of the onto-topological architecture, because "the paramount concern of these areas of study is morphogenesis, the generation of new form".³² But it is no longer a matter of architecture symbolising or simulating current scientific theories but of engaging with the flux of physical reality, beyond the human scale. But with the removal of both scale as well as the idea that architecture should refer to its own tradition, its own 'language', we experience it as the infinity of the sublime in Kant's sense. In judgements of the sublime we are overwhelmed by complexity and movement in the sense that the imagination and reason are overwhelmed. By 'dwelling' within the world of the virtual and animation one might think to approximate the flux, but the question remains of whether this is all simply simulation. We arrive at techno-science as consumer spectacle. Harries, our defender of a 'Heideggerian progressivism'

turns to Kierkegaard in criticising the arbitrariness of such approaches: in Kierkegaard's aesthetic sphere, the aesthete avoids commitments and lives in the categories of the interesting and the boring and wants to see as many interesting things as possible. Looking at such buildings we become aware of how easily the arrangements could have been otherwise, and we feel dissatisfied.³³

REFERENCES

- ¹ Christian Norberg-Schulz, *The Concept of Dwelling* (New York: Rizzoli, 1984): 88.
- ² Neil Leach, "Forget Heidegger", *Scroope, Cambridge Architecture Journal*, 12, (2000): 59.
- ³ Karsten Harries; "In Search of Home". *Cloud Cuckoo Land*, (2000).
- ⁴ Karsten Harries; *The Ethical Function of Architecture* (Cambridge: MIT Press 1997): 2.
- ⁵ Quoted in Fritz Neumeyer, "Nietzsche and Modern Architecture", in *Nietzsche and 'An Architecture of Our Minds'*, edited by Alexandre Kostka and Irving Wohlfarth (Los Angeles, Getty Research Institute, 1999): 288.
- ⁶ Interview with Steven Holl, *ARK*, 4/5 (1993).
- ⁷ Apart from those philosophers mentioned in the present text, one could also mention Michael H. Mitias, David Farrell Krell, Robert Mugerauer, Jürgen Habermas, Wolfgang Welsch, Brian Massumi, Mark C. Taylor, Miguel de Beistegui, Angel Medina, Roger Scruton and Thorsten Botz.
- ⁸ Jacques Derrida, "Point de Folie — Maintenant L'Architecture", *AA Files*, No. 12, Summer 1986.
- ⁹ Gilles Deleuze, "Intellectuals and Power. A Conversation with Michel Foucault" in Michel Foucault, *Language, Counter-memory, Practice: Selected essays and interviews* (Ithaca, N.Y.: Cornell University Press, 1977) 208.
- ¹⁰ Hubert Dreyfus, "Kierkegaard on the Internet: Anonymity vs. Commitment in the Present Age", lecture given at Tampere University, May 2003.
- ¹¹ Cited in Bernard Langer, "The House that Gilles Built", *Datutop* 22 (2002).
- ¹² Henri Lefebvre, *The Production of Space* (Oxford: Blackwell, 1991): 361.
- ¹³ "In Defence of Silence. Intervista di Petra Ceferin a Juhani Pallasmaa", *Progetto*, 7/2001.
- ¹⁴ Andrew Benjamin, *Architectural Philosophy* (London: The Athlone Press, 2000): 7.
- ¹⁵ Gilles Deleuze, *Nietzsche and Philosophy* (London: Athlone Press, 1983): 197.
- ¹⁶ Gilles Deleuze and Félix Guattari, *What is Philosophy?* (New York: Columbia University Press, 1994): 14.
- ¹⁷ Friedrich Nietzsche, *Human, all too Human* (Harmondsworth: Penguin, 1984): #23.
- ¹⁸ Gilles Deleuze, (1983): *ibid.*
- ¹⁹ Elizabeth Grosz, *Architecture from the Outside. Essays on Virtual and Real Space* (Cambridge, Mass.: MIT Press, 2001) 92.
- ²⁰ Gilles Deleuze and Félix Guattari, (1987): 329.
- ²¹ Gilles Deleuze, *Difference and Repetition* (New York: Columbia University Press, 1994): 280.
- ²² Gilles Deleuze and Félix Guattari, *A Thousand Plateaus* (Minneapolis: University of Minnesota Press, 1987): 3-7.
- ²³ Caroline Bos, "Techniques & Effects", *Datutop* 22, (2002).
- ²⁴ Kas Oosterhuis, *Architecture Goes Wild* (Rotterdam, 010 Publishers, 2002).
- ²⁵ Juhani Pallasmaa "Identiteetti, intimitteetti ja kotipaikka — huomiota kodin fenomenologiasta" *ARK*, 1 (1994): 25.
- ²⁶ H-G. Gadamer, *Truth and Method* (London: Sheed and Ward, 1993): 282.
- ²⁷ Pallasmaa (1994): *op. cit.*
- ²⁸ Karsten Harries; (2000): *op. cit.*
- ²⁹ Martin Heidegger, "Building Dwelling Thinking" in *Poetry, Language, Thought* (New York: Harper & Row, 1971): 143.
- ³⁰ *Ibid.*, 153.
- ³¹ Martin Heidegger, "Art and Space", *Man and World*, Fall 6, 1973, 3-8.
- ³² Jeffrey Kipnis, "Towards a new architecture" *AD Profile* 102, cited in Dörte Kuhlman, "Anymotion in Architecture", *Datutop* 22 (2002).
- ³³ Karsten Harries, 2000, *op. cit.* See also "Thoughts on a Non-arbitrary Architecture", *Perspecta*, 20 (1983).