

ARCHITECTURE AND THE GLOBAL ECOLOGICAL CRISIS: FROM HEIDEGGER TO CHRISTOPHER ALEXANDER

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INTRODUCTION: ARCHITECTURE AND THE ENVIRONMENT FROM A HEIDEGGERIAN PERSPECTIVE

The German sociologist Ulrich Beck has well characterized the present predicament:

The transformation of the unseen side-effects of industrial production into global ecological trouble spots is ... not at all a problem of the world surrounding us—not a so-called “environmental problem”—but a far-reaching institutional crisis of industrial society itself.... What previously appeared “functional” and “rational” now becomes and appears to be a threat to life, and therefore produces and legitimates dysfunctionality and irrationality.... Just as earlier generations lived in the age of the stagecoach, so we now and in future are living in the hazardous age of creeping catastrophe. When generations before us discovered despite resistance, and had to shout out loud at the world, we have come to take for granted: the impending “suicide of the species” ...¹

In the face of this predicament, Beck argued, ethics can be compared to “a bicycle brake on an intercontinental jet.”² It is virtually impossible to imagine the discourse of ethics being able to have significant impact on the forces leading to the destruction of the global environment. The emerging conventional view is that the only hope for the future lies in developing more energy-efficient and less polluting technologies, discovering new forms of energy, increasing the efficiency of agriculture, better comprehending and managing ecosystems, and better understanding markets to harness the entrepreneurial talents of capitalists to implement the discoveries of science.³ If ethics is regarded as irrelevant in an age of creeping catastrophe, what role could art (even when broadly conceived to include architecture) play? Looked at in this light, it would appear that art is virtually irrelevant to addressing environmental problems, although

architecture might play some role in developing more energy-efficient buildings. Art is even more ineffectual than ethics.

However, Martin Heidegger advanced the provocative thesis that science is fundamentally limited and that it is to art that we should look for salvation. Science, Heidegger argued, enframes the world to reveal it only as standing reserve to be dominated. It is the very quest for control, which is problematic.⁴ Nature and even people are now evaluated only as instruments. It is this way of thinking that has created a global ecological crisis, and the crisis will not be solved through such thinking. Heidegger called for an inversion of the standing granted to science, ethics, and art. “Ethics” emerged in Ancient Greece with Plato and Aristotle when thinking was becoming a science, and to the present day is contaminated by the same domineering orientation. What is really needed is not the abstract thinking of science or ethics but a different “ethos”; that is, a different way of dwelling on the earth, a way of dwelling such that Being is revealed.⁵ How can this be achieved? Heidegger invoked art. Art reveals (that is, unveils) the Being of beings to reveal their truth as presencing. Truth (conceived of as unconcealedness of beings) and beauty are indissociable. As Heidegger put it: “Truth is the truth of being. Beauty does not occur alongside and apart from this truth. When truth sets itself into the work, it shines forth. The shining forth—as this being [here to be understood actively and transitively] of truth in the work and as work—is beauty. Thus the beautiful belongs in the self-happening of truth.”⁶

Artworks are events of truth to which belongs the beautiful, and these events open a path to dwelling in the light of Being.

Buildings and architecture as forms of art are crucial to this. They are happenings of truth, sites or places in which geometrical space is subordinated to the more primordial possibility of an event in excess of the merely physical or of the merely human, an event in which the human finds its proper place: its home. Buildings open the possibility of genuine dwelling, not just amid things, but as the event of the coming into presence of things out of a non-thingly horizon. As Heidegger wrote of a Greek temple:

It is the temple-work that first fits together and at the same time gathers around itself the unity of those paths and relations in which birth and death, disaster and blessing, victory and disgrace, endurance and decline acquire the shape of destiny for human being.... The temple-work, standing there, opens up a world and at the same time sets this world back again on earth, which itself only thus emerges as native ground.⁷

Through art, and architecture in particular, man dwells poetically on this earth.⁸ The challenge for architecture is to make possible such dwelling, and architecture is beautiful when it does so. It is suggested, without ever being claimed, that dwelling in this way is what is required to properly respond to the ecological crisis.

EVALUATING HEIDEGGER

How can we evaluate such provocative suggestions? Heidegger's oracular style and language have made it difficult to assess his work. Most of his disciples devote themselves to exegesis, as though to have shown how Heidegger developed his ideas and what he really meant is to attain the truth. Even from this perspective, Heidegger promises little to those concerned with addressing the global ecological crisis. After supporting Nazism, Heidegger adopted a very passive orientation to the problems he identified. In the face of the "extreme danger" that "the frenziedness of technology may entrench itself everywhere," Heidegger concluded that "The closer we come to the danger, the more brightly do the ways into the saving power begin to shine and the more questioning we become. For questioning is the piety of thought."⁹ At best we can hope to recover what had been revealed to the Ancient Greeks, who were quite destructive of their natural environment. Taking a more critical stance towards Heidegger, Fredric Jameson concludes that: "Heidegger's 'field path' is, after all, irredeemably and irrevocably destroyed by late capital, by the green revolution, by neocolonialism and the megalopolis, which runs its superhighways over the older fields and vacant lots and turns Heidegger's 'house of being' into condominiums, if not the most miserable unheated, rat-infested tenement buildings."¹⁰

This is not simply a gratuitous display of disrespect for Heidegger. It suggests that Heidegger's diagnosis of the problem is incomplete—it is a claim

that we can no longer dwell in the world as suggested by Heidegger because the global market no longer permits it. Heidegger's call for authentic dwelling is irrelevant before the destructive power of global capitalism. In his study of Heidegger's critique of modernity and its relevance for the environment, Michael Zimmerman is even more critical.¹¹ Zimmerman finally comes to the conclusion that Heidegger's philosophy was fundamentally flawed, undermining its own critical force, something Heidegger himself came to appreciate. As Zimmerman puts it:

Heidegger could read modernity as the most constricted mode of disclosure only by viewing Western history as decline and fall from a nobler origin. Eventually abandoning this view, he could say only that technological modernity excluded the ancient Greek disclosure of being, but ancient Greece excluded the technological disclosure. I would add that ancient Greece also excluded modernity's egalitarian commitments.¹²

This would seem to provide even more reason to dismiss Heidegger.

However, Heidegger's work belongs to the tradition which began with the early Romantics of the late eighteenth and early nineteenth centuries.¹³ Influenced by Kant, Herder, Goethe, Schiller, and Fichte, it was a reaction against the prevailing ideas of the Enlightenment: the mechanistic view of nature, the atomistic view of society, and a highly abstract notion of rationality. The most outstanding representative of this tradition, and the figure who defined its goals, was Schelling. Heidegger was far more indebted to Schelling than he acknowledged, as Sonya Sikka has shown.¹⁴ It was Schelling who argued that art is superior to science as a means to comprehend ultimate reality and who opposed the reduction of nature to a mere instrument for human purposes. It was also Schelling who argued in opposition to Hegelian idealism that there is an "unprethinkable being" preceding all thought, particularly reflective thought. Schelling not only developed a profound critique of the approach to nature of the sciences very similar to Heidegger's and influenced the tradition of hermeneutics with which Heidegger aligned himself, following Herder and Goethe; he also attempted to lay the foundations for a new form of post-mechanistic science in which nature is seen as first and foremost "productivity" or process, and only derivatively as "products" or things. This has developed as the

tradition of process thought, a tradition that includes Peirce, Bergson, and Whitehead and the scientists such as Ilya Prigogine, David Bohm, and Brian Goodwin influenced by them.¹⁵ If we evaluate Heidegger's work as the contribution of a highly original thinker to the developing tradition of thought begun by the early German Romantics, not as a finished body of ideas but as a possible creative advance within this tradition, then we do not have to either embrace Heidegger's work as a whole or dismiss it because of its obvious failings. We can assess his analysis of modernity and claims for art, assimilate his insights, and go beyond him.

When viewed in this way, Heidegger's claim that his own work is fundamentally different and much deeper than science or speculative metaphysics is no longer tenable; but this makes his insights more defensible. While Heidegger himself might have concluded that he had no basis for judging the superiority of one way of revealing the world over another, when seen as part of the broader tradition of process thought and the struggle to overcome the mechanistic world view, Heidegger's work can be seen as a contribution to this struggle for a more adequate comprehension of nature and our place within it. From this perspective, it is not enough to note that the space and time of science are incompatible with space and time as it is lived; it is necessary to revise the notions of space and time within science to make intelligible the possibility of lived space and time. Such ideas can be evaluated according to how they overcome the blind spots and aporias of rival ways of understanding the world. Advancing process thought, Heidegger has also advanced our understanding of what it is to understand the world. In particular, Heidegger has helped overcome the bias in favor of contemplative thinking and visual analogies. Process metaphysics should no longer be understood as a "world view" but as a mode of being in the world whereby it discloses itself and ourselves more adequately. What matters most is not how we think about the world contemplatively but how we orient ourselves while practically engaged within it; that is, how we dwell within it. For speculative metaphysicians and scientists, what is important is not so much the ability to manipulate abstractions in order to make correct predictions, but (in Michael Polanyi's terminology) to make sense of the world by using these abstractions to more adequately "indwell" in what we are trying to understand.¹⁶

BEYOND HEIDEGGER

Going beyond Heidegger, we can see that the modern way of enframing the world as standing reserve is not merely a matter of the forgetting of Being. It is an orientation reinforced and extended by the dynamics of the global market. This is being promoted and manipulated by powerful states and the wealthy elites who control them, emancipated from democratic control in any meaningful sense, as a means to accelerate economic growth, exploit their working classes, and exploit the resources of poorer nations more effectively while providing the military means to maintain and extend the market and control access to resources. Treating the world as a world of things to be exploited is legitimated by mainstream economic theory, management theory, social Darwinism, Darwinist evolutionary theory, and mainstream reductionist science generally, all of which cohere as the integrated world view of scientific (or mechanistic) materialism.¹⁷ The global market, techno-science, and the scientific materialist cosmology which supports these are associated with massive concentrations of power that have neutralized almost all opposition to its present dynamics. The commodification of even the most creative art by the culture industry is an aspect of this neutralization. The situation is far worse than that portrayed by Heidegger. Miguel de Beistegui, in his study of Heidegger, states that

The question, with respect to our contemporary situation, is to know the extent to which the global economy—an economy beyond the general economy of the polis, for no longer tied to the polis of the nation-state, an economy, in other words, which has transformed our very being, and set itself almost entirely free from the "place" in which it was traditionally anchored, reconfiguring also the private space itself as no longer private, but as entirely traversed by this essentially fluid and plastic force: capitalism—that is sweeping us away is not simply a state of homelessness depriving us of any sense of place, deterritorializing the nation and the homeland.... Is there not, in such a context, an erring and a lack of place far more threatening and colossal than anything hitherto experienced, a sort of perpetual banishment fed and kept alive by the economic machine?¹⁸

Any place with the slightest trace of authentic dwelling is immediately packaged to attract the tourist dollar (with tourism now accounting for twenty per cent of all greenhouse gas emissions). With virtually every aspect of nature and social life

commodified and subject to the logic of the global market, almost all effective resistance to its destructive imperatives has dissolved. Throughout the world people have been seduced into giving up their political power (that is, democracy) for the promise of higher levels of consumption that a globally free market will supposedly deliver. Since the 1970s when the environment was first put on the agenda, this logic has accelerated the rate of virtually every form of environmental destruction, despite the emergence of a global environment movement.¹⁹

What could stop these destructive dynamics? We know from the failure of communism that a centrally planned economy is not the solution. One plausible program is to revive democracy, the power of the people to shape their destiny for the common good, wresting power from existing power elites and subordinating the market to the common good of the whole of humanity including future generations. There are enormous obstacles standing in the way of achieving this, not least the power of the power elites, but the most problematic is the dominance of the prevailing scientific materialist cosmology which construes life as a struggle for survival and domination, values above all the unlimited power to satisfy appetites, and denies even the possibility of self-determination, a construal of life continuously reconfirmed by the behaviour of people within a market economy. While Heidegger had virtually nothing to say about freedom and democracy and the scientific materialist cosmology, these were central concerns of the broader tradition to which he belonged. Fichte argued that it is only through being recognized by others as free that we become free agents, and freedom consists in limiting ourselves in accordance with the appreciation of others as free. That is, humans become free, self-determining agents only through their relations to other people whereby the freedom of others is acknowledged. Schelling developed his alternative conception of nature to justify this conception of humans, which were then seen as emergent phenomena within a dynamic, creative nature. This is the conception of humans and their place within nature required to support the struggle for genuine democracy able to appreciate the creativity of both people and natural processes and act accordingly.

Much work has been done elaborating this cosmology and developing it as an alternative foundation for the sciences. However, there are

major difficulties in developing science on these foundations. When setting up experiments the aim is to set up initial conditions, controlling the environment and constituents of entities so as to be able to predict outcomes. This approach does not give a place to immanent causation of processes and our own participation in the dynamics of what is being investigated. There is also the problem of giving a place to mathematics (which implies determinism) in the world while reconciling this with a conception of nature as creative process. While efforts are being made to deal with these problems, the work is at such an abstract level and is so difficult to comprehend that it is difficult to persuade on this basis more than a small minority of people that they need to fundamentally alter their modes of being in the world. However, such problems have almost invariably led exponents of this alternative tradition to appreciate art as complementary to science in comprehending the world. To effect a fundamental transformation of our modes of being in the world, art, with its cognitive claims properly defended, could be more important than post-mechanistic science. And it is in this context that Heidegger's work can be appreciated, although appreciating its full significance requires that it be reinterpreted.

Heidegger can be interpreted as forging a new language (usually by privileging verbs over nouns) to enable people to understand themselves as creative participants within a creative nature; that is, in a world of processes. By developing this to illuminate the mode of being in the world of the Ancient Greeks, he was able to expose the taken-for-granted assumptions of modernity which have hidden from people both the creative activity of processes within their world and also their indebtedness to this creative activity in their own becoming and in their productive activities. Most importantly, those assumptions have hidden from people the meaning of processes in nature, in social life, and in their own individual lives. Heidegger's new language not only enables people to appreciate these processes but also shows how works of art and their buildings disclose people's worlds and thereby the meanings of their lives. Of the arts, no art form has greater impact on the way people experience and orient themselves within the world than architecture. That is, the original tentative suggestion, repudiated by Heidegger himself, that

art generally and architecture in particular might play a fundamental role in engendering a superior ethos or way of dwelling in the world, is justified when Heidegger is reinterpreted as part of the tradition of process thought deriving from Schelling. Rather than lamenting a lost mode of revealing Being, architecture can be appreciated as central to the struggle to develop a more adequate way of dwelling which discloses the world as interrelated processes rather than as merely a collection of things.

REVOLUTIONIZING ARCHITECTURE: THE WORK OF CHRISTOPHER ALEXANDER

While Heidegger has had a major impact on architectural theory through the influence of his notion of lived space,²⁰ it is Christopher Alexander, an architectural theorist who has not been influenced by Heidegger, who has made the most vigorous effort to overcome the form of architecture and town planning that discloses the world and people only as standing reserve. Alexander did not conceive his work in such terms and has shown little interest in ecological problems. His concern has been to provide the means for people to create beautiful buildings, buildings that enable people to feel at home. This, Alexander believes, is the condition for basic improvements in the institutions of society required to put things right socially. To this end, he has attempted to develop an approach to architecture that focuses on living processes, and was led to examine not only the order underlying all that we build, including cities in all ages, but all that grows throughout nature. Opposing the underlying mechanistic assumptions which, he contends, pervade modernist architecture, he has aligned himself with the tradition of process thought and with post-mechanistic science. He claims that architecture can now play a leading role in developing this new understanding of the world. That is, Alexander belongs to the same tradition of thought going back to Goethe and Schelling to which Heidegger, process metaphysicians, and post-mechanistic scientists belong. My contention is that concern with processes leads to a different mode of disclosing the world. People are led to experience themselves as participants in an active world rather than as subjects trying to control it. Alexander's life and work exemplify this, leading to the struggle within architecture for a more adequate way of dwelling in the world in accordance with the

process tradition of thought. It is this reorientation which could fulfill Heidegger's intimation that architecture could change the way people dwell within the world and change what they aspire to, a change that could be central to overcoming the destructive forces of modernity and to creating environmentally sustainable forms of life.

Alexander was preoccupied from his student days with the question of what makes things, especially buildings, beautiful. He believed that most people agree on what is beautiful; it is a quality of reality that most people have no difficulty appreciating. He also believed that most people could see that it is mostly old buildings and cities that are beautiful; if people are honest, they can see that modernist architecture is not beautiful, it is oppressive and ugly. He believed this to be a fact about reality, not a subjective view. The evolution of Alexander's ideas was largely a matter of clarifying the nature of beauty with a view to enabling people to create beautiful buildings. He first set out to discover what is actually going on in good design. Originally, he argued that the object of design is form, and that the problem of design is to fit the form (over which we have control) to its context, which puts demands on this form. He argued that "A well-designed house not only fits its context well but also illuminates the problem of just what the context is."²¹ Alexander attempted to show a deep underlying correspondence between the pattern of a problem and the process of designing a physical form answering that problem. The structure, if successful, will clarify the life it accommodates. This led to a concern to explicitly map the problem's structure and to provide a language to do so, enabling end users to participate in the design process.

Alexander's focus was on the design process by which people make beautiful buildings rather than on the buildings as end products. As his ideas evolved, process came to be emphasized more and more. Initially, Alexander portrayed problems and their solutions as hierarchical structures, the solutions being an exact counterpart to the functional hierarchy established during the analysis of the problems. However, he soon came to see that the free functioning of the system depended not so much on meeting a set of external requirements but on the system's coming to terms with itself, being in balance with the forces generated internally by the system. After comparing planned cities and

unplanned cities, he came to see that it was the tree-like structure of plans with all spaces being allotted to particular functions that deadened social life and alienated people. Noting that self-respecting children far prefer to play in abandoned construction sites than in playgrounds, which are cut off from the rest of society and where everything they can do has been planned, Alexander realized that planned cities have fragmented social life and have prescribed what is to be done in each functional space, eliminating any room for creativity. In his famous paper "A City is Not a Tree," he argues that the richness of pattern of unplanned cities, a richness manifest in their vibrancy, is the result of an overlapping structure that interrelates social activities and leaves open the possibility for ever new uses of space.²² They [Author: do you mean cities, structures or spaces? Please clarify.] are semi-lattices. Reflections on these issues led Alexander to focus on the processes which actually produce the structures of environments, that is, on "generativity."

Pursuing this line of inquiry led Alexander to see that the environment consists of relations or patterns rather than things, and that these patterns are generated by language-like systems of rules. Patterns are recurring problems along with the solutions to these (such as reconciling a range of needs) which can be used a million times over without ever doing so in exactly the same way. "Things" are merely convenient labels we give to patterns or bundles of patterns. Alexander was concerned with those patterns which solve some sort of architectural or social problem, which are embodied in the structures we build. Patterns work by co-existing, competing, and co-operating in some dynamic balance to build up complex wholes, which in turn form higher-level patterns, generating a complex fabric from relatively simple generative rules. On this assumption Alexander attempted to develop a pattern language based on identifying rules operating at all levels of the environment to analyze and facilitate the interaction of human needs in space as a generative process comparable to the form-generating processes in nature. This language was designed to enable lay people to participate in the design process. He argues that "towns and buildings will not be able to become alive, unless they are made by all the people in society, and unless these people share a common pattern language, within which to make these buildings, and unless this common pattern language is alive itself."²³

Increasingly, Alexander was seeing the generation of form in buildings as merely a special case (with "needs" being a particular kind of force) of the generation of form throughout nature, and that such form generation is the essence of life. Beauty was now equated with life. As Alexander put it, "The beauty of a thing is not purely in how it looks. It has to do with how it is. Now how it 'is' essentially involves a relationship between the various events that are going on there.... So it is ultimately the inner life which is the thing that matters."²⁴ Concerned with living both in relation to the design and building activities and in relation to people affected by the resulting buildings, Alexander concluded that this must lead to a new understanding of nature:

I have come to believe that the problem of physical order—the kind of order which creates quality in architecture ... this problem is of so great a stature, that we shall have to modify our picture of the whole physical universe in order to see it clearly.... I believe we are on the threshold of a new era, when this relationship between architecture and the physical sciences may be reversed—when the proper understanding of the deep questions of space, as they are embodied in architecture ... will play a revolutionary role in the way we see the world.²⁵

It was this conviction that led Alexander to embark upon his most important work, a study of the nature of order. At the time he embarked on this, Alexander thought he would write one book. It is now a four-volume work, *The Nature of Order: An Essay on the Art of Building and the Nature of the Universe*, consisting of Book One, *The Phenomenon of Life*, Book Two, *The Process of Creating Life*, Book Three, *A Vision of a Living World*, and Book Four, *The Luminous Ground*.

In these works, Alexander characterizes the discipline of architecture as "a mass psychosis of unprecedented dimension, in which the people of earth ... have created a form of architecture which is against life, insane, image-ridden, hollow."²⁶ He attributes this to the domination of the mechanist-rationalist picture of the world. To combat this, Alexander elaborates a new view of order in terms of which "statements about relative degree of harmony, or life, or wholeness—basic aspects of order—are understood as potentially true or false."²⁷ Alexander's work on order is similar to, although not identical with, complexity theory. His ideas are particularly close to the speculations on order and wholeness of the physicist David Bohm. However, drawing on his

work in his own architecture and on the design process, Alexander has made an original and significant contribution to the tradition of process thought. Providing a sharable perspective based on a holistic view of the goal of life, Alexander aspires to enable people to work together, reconciling the many factors and needs influencing the environment, to make buildings with a profound, living order; that is, to create beautiful buildings. Architecture would again be aligned with life.

THE RELEVANCE OF ALEXANDER TO THE GLOBAL ECOLOGICAL CRISIS

Alexander has gone well beyond the speculative thinking of architects influenced by Heidegger; he is engaged in a struggle to transform architectural practice. While he has not addressed himself to the global ecological crisis, the development of his ideas has led him towards a new way of disclosing nature and people as other than standing reserve, as life with its own internal dynamics. In developing these ideas there has been an astonishing convergence with Heidegger in granting centrality to process over things, and in allowing appreciation of significance within the world. Most importantly, despite appearances, the way Alexander understands the beautiful is strikingly similar to Heidegger's. The beautiful is life, understood as the harmonious ordering of diverse forces and events, disclosed as such in all its relationships (being in the light of Being) and augmented with this disclosing. Like Heidegger, Alexander has been concerned with our sense of place in the world and is concerned to recreate the feeling of belonging, which at the same time is to clarify (or reveal) what this belonging is. Through architecture, he has exposed and offered alternatives to not only the assumptions underlying modernist architecture, but also the institutions of modernity which have generated the global ecological crisis. His work is a major contribution to developing a cosmology that does justice to life and our experience of it as beautiful.

Alexander has addressed more fully than Heidegger the social dimension of our relation to the world and the effect of the market on society. He has forged a real, practical alternative to instrumentalist/functionalist thinking and has struggled to provide the means by which the public can participate in designing and building beautiful environments. It is a challenge to the notion of architects selling a special expertise to the public

which takes out of the public's hands any participation in the building of its environments. Perhaps more importantly, Alexander is concerned to overcome the division between the public and the private and to recreate or revive those spaces and institutions that in the past mediated between individuals and the State. This is associated with efforts to revive institutions and corporations as self-organizing processes. That is, through architecture, Alexander is addressing the atomization of society and the corrosion of public life, institutions, and organizations that have undermined real democracy.

The implications of Alexander's work for the global ecological crisis can be clearly seen when we consider what his work implies for individuals. It has been widely noted how the atomizing functionalism dominating the modern world has dehumanized people. Having lost the unity of the social and the individual, people have lost their individuality, their power as citizens, and, with the globalization of the economy, their economic security. They have been swindled into an endless pursuit of money to compensate for what they have lost. They consume more than ever before because, as Baudrillard notes, they now are consuming symbols rather than what is useful.²⁸ They buy commodities to define their identities, but once bought, these commodities almost immediately lose their symbolic significance. Consequently, consumers can never be satisfied. And to escape the emptiness and ugliness of their own environments they become tourists, but take this emptiness with them and debase everywhere they visit with their presence. Alexander promises to regenerate life by engaging such people in designing and building beautiful environments, reviving their social spaces and their institutions to enrich their lives and their appreciation of beauty. Involving people in this way requires of them that they come to understand in a practical way a cosmology that validates their experiences of beauty and life. If this project is successful, people will dwell within the world in a different way and again be aligned with life, and with revived communities, they will also be empowered to further the interests of life.

At this stage it is difficult to finally assess Alexander's work and its potential. The successful appropriation of his ideas by computer scientists gives some indication of the power and generality of his analysis of order. This project is a major advance in the

tradition of process thought, a tradition developed in opposition to mechanistic thinking and the social order founded upon it. By calling for a transformation of architecture on this basis to enable people to appreciate and participate in the creation of beauty, Alexander is promoting a mode of dwelling on earth that will reveal and augment life. While architecture by itself is unlikely to overcome the destructive power of the global market and the political institutions and power elites which are now supporting it,²⁹ once the problems he is grappling with and the relationship between these and the broader tradition of process thought are understood, it is difficult to imagine the global ecological crisis being addressed successfully without the kind of revolution in architecture that Alexander is striving to bring about. □

NOTES

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4. Martin Heidegger, *The Question Concerning Technology*, tr. William Lovitt (New York: Harper, 1977), 5.
5. Martin Heidegger, "Letter on Humanism" in *Basic Writings*, ed. David Farrell Krell (London: Routledge & Kegan Paul, year?), 232.
6. Martin Heidegger, *Holzwege* (Frankfurt am Main: Vittorio Klostermann, 1950/1980), 68, translated and cited in Miguel de Beistegui, *Thinking with Heidegger: Displacements* (Bloomington: Indiana University Press, 2003), 153.
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8. Martin Heidegger, "...Poetically Man Dwells..." in *Poetry, Language, Thought*, 225.
9. Heidegger, *The Question Concerning Technology*, 35.
10. Fredric Jameson, *Postmodernism or, The Cultural Logic of Late Capitalism* (Durham: Duke University Press, 1991), 34.
11. Michael E. Zimmerman, *Heidegger's Confrontation with Modernity: Technology, Politics, Art* (Bloomington: Indiana University Press, 1990).
12. Michael E. Zimmerman, *Contesting Earth's Future: Radical Ecology and Postmodernity* (Berkeley: University of California Press, 1994), page #?.
13. See Andrew Bowie, *Aesthetics and Subjectivity: From Kant to Nietzsche*, 2nd ed. (Manchester: Manchester University Press, 2003), esp. 8.
14. Sonya Sikka, "Heidegger's Appropriation of Schelling," in *Southern Journal of Philosophy* Vol. 31, No. 4 (1994): 421–428.
15. See Arran Gare, "The Roots of Postmodernism: Schelling, Process Philosophy and Poststructuralism" in *Process and Difference*, ed. Catherine Keller and Anne Daniell (New York: S.U.N.Y. Press, 2002), 31–53.
16. Michael Polanyi, *Knowing and Being*, ed. Marjorie Grene (Chicago: Chicago University Press, 1969), 148.
17. See Arran Gare, *Nihilism Inc.: Environmental Destruction and the Metaphysics of Sustainability* (Sydney: Eco-Logical Press, 1996), 112–188.
18. Miguel de Beistegui, *Thinking with Heidegger: Displacements* (Bloomington: Indiana University Press, 2003), 163.
19. See Joel Kovel, *The Enemy of Nature, The End of Capitalism or the End of the World?* (London: Zed Books, 2002).
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22. Christopher Alexander, "A City is Not a Tree" in *Human Identity in the Urban Environment*, ed. Gwen Bell and Jacqueline Tyrwhitt (Harmondsworth: Penguin, 1972), 401–428.
23. Christopher Alexander et al. *A Pattern Language: Towns, Building, Construction* (New York: Oxford University Press, 1977), x.
24. *Ibid.*, 56.
25. *Ibid.*, x.
26. Christopher Alexander, *The Nature of Order, Book One: The Phenomenon of Life* (Berkeley: Centre for Environmental Structure, 2002), 6.
27. *Ibid.*, 22.
28. Jean Baudrillard, "The System of Objects" in *Jean Baudrillard: Selected Writings*, ed. Mark Poster (Cambridge: Polity Press, 1988), 10–22.
29. As James M. Mayo argues in "Marxism, Architectural Aesthetics, and Practical Ethics," *The Structurist*, No. 41/42, 2001/2002: 74–82.