Sustainable Architecture and the Pluralist Imagination

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Abstract

In our review of the literature concerning sustainable architecture we find a remarkably diverse constellation of ideas that defy simple categorization. But rather than lament the apparent inability to standardize a singular approach to degraded environmental and social conditions we celebrate pluralism as a means to contest technological and scientific certainty. At the same time we reject epistemological and moral relativism. These twin points of departure lead us to propose a research agenda for an architecture of reflective engagement that is sympathetic to the pragmatist tradition.

Introduction

Imagine ourselves as architects, all armed with a wide range of capacities and powers, embedded in a physical and social world full of manifest constraints and limitations. Imagine also that we are striving to change that world. As crafty architects bent on insurgency we have to think strategically and tactically about what to change and where, about how to change what and with what tools. But we also have somehow to continue to live in this world. That is the fundamental dilemma that faces everyone interested in progressive change. ¹

The diversity of images of what sustainable architecture might be--that is, what it might look like, where it might be located, what technologies it might incorporate, what materials it might constructed from and so on--is quite bewildering and rather than diminishing over time, appears to be accelerating. Three decades of debate about sustainable architecture and a search for some form of consensus around universal best environmental practice appears to have failed. As Hagen puts it, “environmental architecture, in other words, is environmental architectures, a plurality of approaches with some emphasizing performance over appearance, and some appearance over
performance.” This situation often provokes deep depression amongst some architects. For example, James Wines despairs that “A major proportion of the architectural profession has remained oblivious to the magnitude of its irresponsible assaults on the land and resources,” while contemporary architectural practice tends to “confuse, rather than reinforce, a progressive image of earth friendly architecture.” Of course, other architects disagree. Harry Gordon argues the opposite, that;

After decades of intense effort by designers, architects, individuals, and organisations, a tectonic shift in design thinking has occurred: sustainability is now becoming mainstream. Some might even say it has become a societal design norm.

So the debate rages on between what are often called light green and deep green architects. In this essay we want to take a different stance. Rather than argue that we need revolution or reformation, more or less technology, more or less pious behavior, to embrace or abandon the city, or to develop clearer definitions or standardization, we want to explore, even celebrate the diversity of contemporary debate about sustainable architecture. We want to develop the thesis that the challenge of sustainability is more a matter of situationally specific interpretation than of the setting of objective or universal goals. This is not to suggest, as radical relativists might, that environmental problems are merely imaginary or that they are no more important than any other social problem. As Steven Yearley has argued, to “show that a social problem has been socially constructed is not to undermine or debunk it,” and even more importantly, “The detachment required from social science should not become an excuse for cynical inaction.” Instead we wish to engage the search for more sustainable architecture with debates about culture and nature in the social sciences.

The key question for David Harvey, and for us, is “what kind of architecture do we collectively want to create for the socio-ecological world in which we have our being.” While Harvey is talking here about architecture “in the broadest possible sense” about how we organize our societies, the question resonates just as strongly for building design. The challenge then is both conceptual and practical. How to become “insurgent architects,” bent on creating alternative futures, while also recognizing the
heterogeneity of, and contestation over strategies and tactics of sustainable design.

This essay, then, critiques the notion that we can solve the grand problems of environmental degradation and social injustice by simply applying a ‘best practice’ technological fix. In response to a world of “Khunian” paradigm shifts about the ways in which architects conceptualize social and ecological issues, we think that, while more and better building science is certainly needed, it might be more productive to explore what architects actually do in the everyday context of the studio and on site--to explore the cultural framing of what Bruno Latour calls “science in practice.” However, to favor a more contextual, reflective building science is not to abandon all hope of tackling environmental challenges. Like Richard Rorty, we argue that the process of achieving social, political and environmental change is not advanced by developing universal claims about progress (as do many modernists) or by endlessly deconstructing our language and actions (as do many postmodernists). Following John Dewey, Rorty calls on us to abandon “the attempt to find a (single) theoretical frame of reference within which to evaluate proposals for the human future.” The effect of this stance, Rorty argues, is to change our understanding of the meaning of progress. That is, “Instead of seeing progress as a matter of getting closer to something specifiable in advance, we see it as a matter of solving more [local] problems” one at a time.

So while we encourage critical engagement with abstract theory about environmentalism, we are not interested in simply playing language games. Like Macnaughton and Urry we are keen to go beyond the “rather dull debate between ‘realists’ and ‘constructivists’” and instead identify “specific social practices, especially of people's dwellings, which produce, reproduce and transform different natures and different values.” Our hope is to encourage a deeper engagement with sustainable architecture, one that doesn't shy away from broader sociological or philosophical questions or merely indulge in the narrow “how-to” debates that characterize so much of the green architecture literature. By exploring sustainable architectures in the plural, as competing interpretations of our environmental futures, we can begin to ask new questions and perhaps introduce some fresh thinking about sustainable design.
Contesting Certainty

For many writers the challenge is rather more straight-forward than our theorizing would suggest. Stimulated by growing resource scarcity, the debate about climate change, and the threats of sick-building syndrome, more and more architects have taken-up the mantle of promoting ecological concerns. They have, in the main, focused on reducing the energy intensity of buildings through the use of insulating materials, low energy lighting, promoting natural ventilation, eschewing non-renewable and potentially toxic materials, and embracing “green urbanism.” Energy economics is a major priority among these practitioners. As Susan Maxman argues, “its not like the 1970's, when every house had to be earth-bermed, solar powered, etc... we realize now that it has to make economic sense as well.” This popular view of sustainable architecture renders it roughly synonymous with energy efficiency. If this is the definition of sustainable architecture that is ultimately accepted by a majority it would seem that the theorizing we are advocating in this essay might be productively replaced by radically simplified checklists that itemize “best practices,” or concrete things-to-do. Richard Rorty, has, after all, admonished us to “… put a moratorium on theory …” and get on with “… solving the problems of men.”

There are, of course, many authors who have approached the challenge of sustainability with just such a “can-do” attitude. In the U.K. for example, Brian Edwards and Paul Hyatt have written a “rough guide to sustainability,” published by the Royal Institution of British Architects (RIBA), which confidently links the definition of sustainability to “a number of important world congresses” through which we have learned what it means to be sustainable. Architectural sustainability is linked to the much quoted Brundtland definition through an emphasis on limits to the “carrying capacity” of the planet, and they point to the UK's Building Services Research and Information Association (BSRIA) definition of sustainable construction as; “the creation and management of healthy buildings based upon resource efficient and ecological principle.” Drawing upon these sources, Edwards and Hyatt argue that a “large part of designing sustainably is to do with energy conservation,” while also recognizing that it is also about “creating spaces that are healthy, economically viable and sensitive to local needs.” However, the rest of their guide has little to say about wider social and political issues and focuses almost exclusively on resource
efficiency.

Our intention here is not to critique this methodology or to argue that the range of environmental innovations Edwards and Hyatt highlight are not valid, socially, commercially or technically, in their own terms. Along with John Hannigan, the aim of our analysis is not to “discredit environmental claims but rather to understand how they are created, legitimated, and contested.” Following Bruno Latour, we wish to open the lid of these “black boxes” and better understand the implicit values that lie inside their making. The critical point we wish to engage with is the apparent self-confidence with which some architects define and respond to the sustainability challenge.

Edwards and Hyatt claim that these alternative visions of how we might best live in harmony with nature can be adequately expressed through an energy-rating model. From a US perspective Harry Gordon concurs when he argues that the “LEED standards, issued in 2000, are creating a common understanding of what it means to build green.” Employing similar logic, Paul Hawken, Amory Lovins, and Hunter Lovins, in their very influential book, *Natural Capitalism*, argue that consumers will automatically embrace radical resource efficiency once they understand that they can reduce consumption “… without diminishing the quantity or quality of services that people want.” This level of self confidence in the compelling transparency of sustainable architecture to produce social and environmental change assumes a purely scientific or quantitative framing of the problem and that there are no barriers, save our awareness, to implementation.

There are, however, others who are less sanguine about our ability to scientifically express our relationship to nature. Eric Schatzberg, for example, finds the optimism of Hawken et al. to be a “flawed” example of “technological utopianism.” He holds that “Ultimately their faith in technological progress has blinded them to the political dimension of the revolution that they so fervently desire.” But Shatzberg’s skepticism is not new. Architectural historian Richard Ingersoll warned as early as 1996 that,
element of architectural discourse is the endemic utopianism attached to it. Utopian solutions … are counterproductive to real social progress because they evade the political process it would necessitate to achieve social goals. 23

Ingersoll would clearly object to the lack of equal assessment given by Edwards and Hyatt to issues related to social equity and the political process required to set new standards. Elsewhere we have catalogued the contested nature of sustainable architecture as an “essentially contestable concept,” characterized by paradox rather than certainty. 24 Deyan Sudjic has usefully summarized this confusion;

Despite the dogmatism of many of the specialists about what is and what is not an ecologically sensible approach to architecture there can be no certainty. Like all new religions, there is endless scope for doctrinal dissent. There are many different approaches, from those who believe in low-tech mud walls, to the enthusiasts for hi-tech mechanisms. 25

Our intention here is not to retread this ground, but rather to propose that we turn away from the search to discover universal definitions of sustainability or standardized forms of best practice and find a different way forward. In order to do so we must draw upon a wider set of disciplinary sources and begin to connect architectural debate to theory and practice in the humanities and social sciences. A good place to begin is with the proposals of anthropologist Clifford Geertz who has argued that;

… the shapes of knowledge are always ineluctably local, indivisible from their instruments and their encasements. One may veil this fact with ecumenical rhetoric, or blur it with strenuous theory, but one cannot really make it go away. 26

Geertz argues that to comprehend the complex relationship between knowledge, action, and local culture necessitates replacing “thin descriptions” that focus on the narrowly empirical, with “thick descriptions,” explorations of local contexts which look across a “multiplicity of complex conceptual stories, many of them superimposed upon or knotted into one another, which are at once strange, irregular, inexplicit…” 27 It is the “strange, irregular, inexplicit” ways in which people
interpret the world, and how these competing approaches reflect the cultures of people who are involved in this process of architectural making, that is our focus.

As is Geertz, Andrew Jamison is interested in what he terms the “making of green knowledge,” that is the ways that “different producers of knowledge … take their point of departure, their problem formulation, from different aspects of reality.”

28 By focusing on the process of environmental knowledge making we can avoid setting up bi-polar oppositions between different paradigms of thought, the light versus dark green architects or the social versus natural scientists. Instead we can recognize researchers and practitioners as reflecting a constellation of values—differing, often competing, modes of knowledge developed by different “epistemic communities.” 29 Jamison puts it this way;

There have emerged a number of competing academic, or analytical, responses to the new environmental challenges… based on different ideals of scientific knowledge, different ‘epistemic’ criteria, as well as different varieties of scientific practice. 30

Jamison draws on Jurgen Habermas to suggest that the natural, social and human sciences are all underpinned by differing “knowledge constituting interests” whether it be respectively, one of control over nature, the management of nature, or a better understanding of nature. To complicate matters more, environmental advocates of every persuasion are adept at creatively drawing upon these different disciplinary traditions to support their respective visions. As Ulrich Beck remarks, “The observable consequence is that critics (i.e. environmentalists) frequently argue more scientifically than the natural scientists they dispute against.” 31 Everyone it seems is involved in making what Michel Foucault called “truth claims,” each seeking to frame environmental responses in relation to a particular problem definition. Seen this way, appeals to facts and figures, or aesthetics, or experience, or spirituality, all represent alternative forms of knowledge which should be treated symmetrically. As Beck again puts it; the “claims of different expert groups collide with one another, as well as with the claims of ordinary knowledge and of the knowledge of social movements (thereby opening) up a battleground of pluralistic rationality claims.” 32 Moreover, given that, “Except for the name of ‘ecology’ itself, virtually nothing unites the
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bioregionalists, Gaians, eco-feminists, eco-Marxists, biocentrists, eco-anarchists, deep ecologists and social ecologists.” 33 Any attempt to neatly categorize or “essentialize” forms of environmentalism along a scale of light and dark, or deep and shallow, as some authors have attempted, seems fatally flawed. As David Schlosberg suggests, “There is no such thing as environmentalism. Any attempt to define the term in a succinct manner necessarily excludes an array of other valid definitions.” 34

Departing from an understanding founded on a pre-defined conception of the environmental problem in which appropriate ends (sustainability) and means (technology) are simply assumed, we argue that it will be more productive to explore the ways in which individuals, groups, and institutions embody widely differing perceptions of what environmental innovation is about. As Marteen Hajer argues;

… the present hegemony of the idea of sustainable development in environmental discourse should not be seen as the product of a linear, progressive, and value-free process of convincing actors of the importance of the Green case. It is much more a struggle between various unconventional political coalitions, each made up of such actors as scientists, politicians, activists, or organisations representing such actors, but also having links with specific television channels, journals and newspapers, or even celebrities. 35

We have only to think of the tensions and inter-linkages between the various contributors to the urban environmental debate to spot the opportunity for contestation. In the U.K. we could think of Prince Charles, Energy Saving Trust, Friends of the Earth, British Council of Offices, Royal Institution of British Architects, Alternative Technology Centre, Building Research Establishment etc. In North America we can similarly think of the U.S. Green Building Council, Sierra Club, Earth First!, the Rocky Mountain Institute, the First Nations of Canada, and former Vice President Al Gore as sitting uncomfortably in the same category. Each of these actors and institutions possess “a particular way of thinking and talking about environmental politics” reflecting the “rather different social and cognitive commitments” which become reflected in the story lines each actor develops about what a green building is or is not. 36 As Schlosberg summarizes in relation to the strongly related challenge of environmental justice; “An environmental justice
movement can be unified, but it cannot be uniform. An insistence on uniformity will limit the diversity of stories of injustice, the multiple forms it takes, and the variety of solutions it calls for. “

So, from this analytical standpoint we cease to view green buildings as merely differently configured technical structures but as pluralist practices, often competing and contested, of design and development. As Hajer points out, to analyze environmental questions in terms of “quasi-technical decision-making on well defined physical issues misses the essentially social questions that are implicated in these debates.” Analyzing discourses of environmentalism, “as a specific ensemble of ideas, concepts, and categorisations that are produced, reproduced, and transformed in a particular set of practices and through which meaning is given to physical and social realities,” allows us to view green buildings as representations of alternative ecological visions, or material embodiments of the competing discourses that make up the green buildings debate. Tracing the resonances and dissonances between each of these discourses supports John Dryzek's argument that “… language matters, that the way we construct, interpret, discuss, and analyze environmental problems has all kinds of consequences.” But, if “language matters,” how is it possible to accept, let alone celebrate, the existence of diverse sustainability discourses without collapsing into total relativism?

The Challenge of Relativism

‘You have to choose’, roar the guardians of the temple. ‘Either you believe in reality or you cling to constructivism.’

To be absolutely clear, we categorically reject epistemological or moral relativism—the notion that all claims are equally true or just. It seems necessary to make this bald statement as reception to our argument has been met with the accusation that “... everything is equally valid, nothing is wrong, all seems worthy of taking on board, no judgment ensues, and we learn nothing.” Horrified by any deviation from a design script, often written by an industry of paid consultants with a vested interest in the dominance of one set of solutions over another, such critics claim that we must close down debate about sustainable design and leap into action. This fundamentalist
backlash can mean, as Latour has joked, that “in order to show that one is not a dangerous outcast, it seems compulsory to swear a pledge of allegiance to ‘realism’—now meaning the opposite of constructivism.” We prefer to concur with Latour that “constructivism may be our only defence against fundamentalism.”

One way to avoid the perils of relativism, yet remain tolerant of diversity, is to look to the epistemology of Donna Haraway. She has rejected the seemingly objective “god's eye view” of worldly phenomena, a view favored by traditional science, in favor of “situated knowledges” in which we interact from particular vantage points with a world of interactive subjects. In Haraway's view,

“… only partial perspective promises objective vision. All western cultural narratives about objectivity are allegories of the ideologies governing the relations of what we call mind and body, distance and responsibility.”

Haraway reconstructs the modern Cartesian assumption that scientists who objectively study nature at a distance have no immediate responsibility for what they see through their instruments. She continues: “Feminist objectivity is about limited location and situated knowledge, not about transcendence and splitting of subject and object. It allows us to become answerable for what we learn how to see.” In other words, one can acknowledge the existence of competing views of reality that emerge from other perspectives without abdicating one's responsibility to act upon what one has learned to see from one's own particular perspective. Seen this way, “accounts of a ‘real’ world do not, then, depend upon a logic of ‘discovery’ but on a power-charged social relation of ‘conversation’.” Relativism, for Haraway, is only the flip side of modern totalizing objectivity because both positions deny the stakes shared by humans and non-humans. In this way, she argues, relativism constructs barriers to “seeing well.” The obstacles constructed by our distance from phenomena, or by their overwhelming scale, arise only when one adopts a “god's eye view” of reality. Seeing a single truth “out there” and seeing all interpretations of reality as equally true is, in the end, the same Cartesian attitude.

David Schlosberg has argued that Haraway's epistemology ultimately stands on the shoulders of the “radical empiricism” proposed by the American pragmatist William James at the turn of the twentieth century. Drawing upon similar sources,
Richard Rorty usefully describes this analytical approach as “antirepresentationalist,” one that “does not view knowledge as a matter of getting reality right, but rather as a matter of acquiring habits of action for coping with reality.” Learning “how to see” from the limitations of a particular place is, then, the only way to appreciate human complicity in and responsibility for constructing and reconstructing the world.

Our approach is then to analyze sustainable buildings as sociotechnical artifacts constructed and reconstructed in situationally specific contexts. Our use of the term “technology” here is an expansive one. We mean by it not only the artifacts associated with sustainable architecture—solar collectors, wind generators, bio-mass boilers and the like—but the knowledge required to construct and use these artifacts, as well as the cultural practices that engage them. This stance echoes that of Andrew Feenberg who has similarly explored these approaches and emphasized the need to avoid the essentialist fallacy of splitting technology and meaning, and to focus instead on the “struggle between different types of actors differently engaged with technology and meaning.” For Feenberg, the contexts of technology include such diverse factors as “relation to vocations, to responsibility, initiative, and authority, to ethics and aesthetics, in sum, to the realm of meaning.” Wrapped up in each technological artifact, or in the case of our architectural interests, each building, are an assembly of ideologies, calculations, dreams, political compromises and so on. Seen this way;

… technologies are not merely efficient devices or efficiency orientated practices, but include their contexts as these are embodied in design and social insertion.

Feenberg usefully gives us an example of a modern, western house which on the one hand has increasingly become an “elaborate concatenation of devices,” the center of “electrical, communications, heating, plumbing, and of course, mechanized building technologies.” For builders, houses are often little more than this. On the other hand, houses are much more than “an efficient device for achieving goals” and as home dwellers we are all skilled at creating a domesticated environment, which has “little or nothing to do with efficiency.” Feenberg acknowledges that a distinction between the technical (the electric circuit) and the social (the experienced of warmth and light) has a certain validity, in that it influences the development of professional technical disciplines. However, to treat each as an essentially distinct category would
be to deny that, “… from an experiential standpoint these two dimensions--device and meaning, technical and life-world practice--are inextricably intertwined.”

While we acknowledge how a technical, performative approach to understanding environmental design has brought undoubted benefits in terms of highlighting the issues of energy efficiency in buildings, our aim is to fundamentally revise the focus and scope of the debate about sustainable architecture and to reconnect issues of technological change with the social and cultural contexts within which change occurs. To be clear, this is not a plea to relieve architects of yet more responsibility and render it up to social scientists as another in the long list of consultants employed to solve problems external to design. It is, rather, a plea for architects to expand the variables of design practice itself. It is a plea for both designers and building scientists to design and develop environmental futures that are not only technologically possible, but socially desirable.

**Reflections and engagements**

To this point we have identified and critiqued singular models of sustainable architecture and began to reconstruct an alternative theoretical framework for better understanding the plurality of sustainable architecture. However, there remains the task of escaping from the trap of endless speculation and interpretation. Recalling the admonition of Richard Rorty to stop theorizing and get on with the business of solving the real problems of women and men, we must think about engagement with the design process and how we might connect our theoretical flexibility with the materiality of design in particular contexts. Or to put it another way, how do we connect debates about pluralism with both critical theory and pragmatism. This tension between practices of interpretation and engagement, contemplation and action, or reflection and emancipation is not a recent challenge. These debates have a history, a politics, and even a geography, as we noted in an edited collection of essays on sustainable architecture from European and American authors. Andrew Jamison, an American environmental academic who has lived and worked in Europe for thirty years, similarly finds “… a huge difference between American writings, with their patriotic enthusiasms and their sticking to the ‘facts’, and European writings, with their cosmopolitan sophistication and speculative theories.” Jamison is “… struck by the discursive dissonances, the interpretive imbalances, between the hemispheres.”
We have found that Jamison is not the first to categorize Europeans and North Americans in this way. Critical theorists, Max Horkheimer principal among them, have tended to paint American engagement in the world as dangerously naïve. Horkheimer and his colleagues were critical, not just of American political and business interests but found the cultural attitudes of American politics and business to be exemplified by the writings of American pragmatist philosophers, John Dewey in particular. Horkheimer describes pragmatists as Enlightenment positivists overly impressed with the “institutions and goals of industrial technology.” Dewey, a contemporary of Horkheimer, was characterized as simply too unsophisticated to recognize the degree to which modern technology is complicit with the underlying values of liberal capitalism.

In response to this line of criticism, the philosopher Larry Hickman argues that Horkheimer’s critiques are themselves deluded by the myth of elite objectivity and distanced from community-based inquiry held accountable by adequate checks and balances. Dewey himself argued the reverse of Horkheimer—that it is not the fault of technology if it is imagined and controlled by the few for their own benefit. Rather, the fault lies with a more general failure to employ technology in solving real problems. For Dewey the problem was not too much democracy or too much technology as Horkheimer proposed, but too little of both. So, where critical theorists reduced American pragmatism to a simple “philosophy of action,” Hickman retorts that pragmatism is a “philosophy of production.” He means by this that “… the goal of inquiry is not action, but the construction of new and more refined habits … .”

Richard Rorty has also responded to the critical theory characterization of American pragmatism. Rorty begins his response, however, by acknowledging that critical theory and pragmatism share two key assumptions: First, that the Enlightenment substituted faith in human reason for faith in supernatural guidance, and second, that human reason is still not capable of describing nature as it is. As important as these shared assumptions may be, any further agreement between Horkheimer and Dewey then seemed unlikely. Where critical theorists find Americans generally naïve, Rorty finds the American optimism to be courageous because they have been the first society to “… renounce hope of justification from on high—from a source which is immovable and eternal.” From Rorty's partial
perspective, the advocates of critical theory have come “… to prefer knowledge to hope” and as a result their “disengagement from practice produces theoretical hallucinations.” According to Rorty, the pragmatists Whitman and Dewey felt that modern Europeans tried much too hard to produce knowledge and authority as a precursor to action.

Our geographical frame, however, must not be applied too rigidly as there are other European traditions of thought that connect strongly to American pragmatism. Rorty points to Wilhelm Von Humboldt's argument that any form of social organization must pursue “human development in its richest diversity,” while David Schlosberg highlights the pluralist philosophy of Isaiah Berlin and his argument that recognition of multiple points of view and the incommensurability of values is not relativistic. Bruno Latour has also sought to distinguish the productive effects of “constructivism” from the destructive effects of “deconstructivism,” emphasizing how “everywhere, building, creating, laboring means to learn how to become sensitive to the contrary requirements. To the exigencies, to the pressures of conflicting agencies where none of them is really in command.” Which brings us back to William James and his claim that knowledge “is made by relations that unroll themselves in time.”

For Rorty, these ideas come together in John Dewey's call to treat ideas of right and wrong, “… not as signifying a relation to some antecedently existing thing…but as expressions of satisfaction at having found a solution to a problem.” In this way we move from being what Rorty, referencing Dewey, calls “spectators,” to being “agents” of change, committed to “protocols of social experiments whose outcomes are unpredictable.” Seen this way, the endless assessment of sustainable architectures in terms of their ideological purity that might help us to distinguish eco-feminists from deep ecologists, eco-socialists from Earth-firsters!, or gaias from Sierra Club members is not productive. As Schlosberg argues, “plurality is not a phenomena to be categorized, but rather needs to be the concept at the centre of the analysis.” It is to the development of a pragmatic architectural practice that embraces a critical pluralism that we finally turn.

**Sustainable Architecture in a Pluralist Universe**
As pluralism indicates that no one perspective may lay claim to epistemic, moral or rational authority, the task of theory is to examine what each perspective provides, how to adjudicate among them, and how to reconcile conflicting perspectives in democratic practice.  

Through this paper we argued for diversity in ways of seeing and practicing sustainable, green, regenerative or ecological architecture. In doing so we have been influenced by David Schlosberg's proposal for a “critical pluralism.” For Schlosberg, “Environmentalism” is simply a convenience—“a vague label for an amazingly diverse array of ideas that have grown around the contemplation of the relationship between human beings and their surroundings.” Drawing upon a pragmatic logic similar to the above, Schlosberg argues therefore that “pluralism demands engagement.” Critically, the “dilemma” of difference will not be overcome simply by liberal tolerance, but by what he calls “agonistic respect,” which makes it tactically possible for those who may hold thoroughly allergic metaphysical beliefs—deep ecologists and ecological modernists, for example—to act together in achieving a particular limited goal, if not a totalizing utopian order. By responding to Schlosberg’s call to “acknowledge” and “recognize” the diversity of practices that might point to alternative sustainable futures, we may begin to chart an agenda for future research that would challenge the orthodox, isolated categories of building design, building science, social science, and industrial ecology and “engage” in critical, transdisciplinary research. Our agenda, preliminary as it is, includes four proposals for action:

First, as must be clear by now, we find significant resources of salient theory in the writings of those who are productively blurring the distinction between critical theory, pluralism, and pragmatism—James, Dewey, Hickman, Feenberg, Haraway, Latour, Schlosberg, and Rorty in particular. Unfortunately, these authors have written relatively little on the topic of architecture and even less on the topic of sustainable architecture. The absence of research in this area provides a call for architectural theorists, such as Joan Ockman and Daniel Friedman, to continue investigating
any affinity between pragmatism and architectural production. It also creates a
demand for symposia and other dialogic spaces that would initiate dialogue between
interested practitioners, architectural theorists, philosophers, and the public.

Second, proposals for critical pluralism are also coming out of the discourse
concerning “civic environmentalism” initiated by Dewitt John,\(^80\) William Shutkin,\(^81\)
Andrew Light,\(^82\) and Craig Hanks.\(^83\) This literature recognizes the relationship
between democratic participation and the resolution of environmental problems.
Alternately called “ecological citizenship,” such proposals have in common the belief
that environmental problems will not be solved without substantial civic participation.
Related concepts have been explored for some years in the EU by Lucien Kroll, Peter
Hubner, Peter Blundell Jones, and others.\(^84\) In North America Donald Schön’s
proposal for “reflective practice” pioneered this direction.\(^85\) Introducing the related
discourses of critical pluralism and participatory design into architectural education is,
then, a way of renovating practice itself over time. The pedagogical practices of
Sergio Palleroni,\(^86\) Brian Bell,\(^87\) and Sam Mockbee\(^88\) demonstrate the growing
linkages between environmental sustainability and civic engagement. Alternative
modes of engaging citizens in architectural production are, then, a second agenda item
for further research.

Third, we need to open up and explore the language we use to talk about
sustainable architecture. As Andrew Jamison has suggested, “More fluid terms are
needed: dialectical, open-ended terms to characterize the ebbs and flows, nuances and
subtleties and the ambiguities of environmental politics.”\(^89\) There is a need for
“statements that are open rather than doctrinaire,”\(^90\) and statements that “conscript”
rather than alienate.\(^91\) We must encourage a debate in which “discourse is never-
ending, and solidarity is forever creating new networks and mosaics.”\(^92\) As we have
argued elsewhere, public engagement in the design of sustainable communities
includes the social construction of urban “story lines” which are “something like a
meta-conversation—a shared way of making sense of the past and speculating about
what might become true in the future.” 93 It is by exploring these stories, through ‘public talk’, that we will better guide the making and remaking of sustainable cities.

And finally, practice is itself a topic for research. We need to investigate how the social systems of reward and penalty that now isolate practice from research, and research from practice, can be modified to stimulate new modes of architectural production that might alternately be described as reflective practice or grounded research. In this way debates about sustainable architecture may be constantly reshaped by the experience of practice, while practice might be reframed by the public talk advocated above.

Notes


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15 Rorty, Achieving Our Country, p. 91.


39 Hajer, *The Politics of Environmental Discourse*, p. 44.


43 Latour, *The Promise of Constructivism*, p. 27.


46 Haraway, Situated Knowledges, p. 181.

48 Haraway, Situated Knowledges, p. 182.


53 Feenberg, *Questioning Technology*, p. xiii.


55 Feenberg, *Questioning Technology*, p. xi.

56 Feenberg, *Questioning Technology*, p. xii.

57 Elsewhere we have discussed this problem as one of the “system boundaries” within which various disciplines consciously restrict the limits of their expertise. See, Kroes, Peter, Andrew Light, Steven A. Moore, and Pieter Vermass. *Philosophy of Design: From engineering to Architecture*. Berlin: Springer, in press.


59 Guy and Moore, *Sustainable Architectures*, 2005


93 Moore, *Alternative Routes to the Sustainable City*, in press.