This article appeared in Harvard Design Magazine, Fall 2004/Winter 2005, Number 21. To order this issue or a subscription, visit the HDM homepage at <http://www.gsd.harvard.edu/hdm>.

Architects Behaving Badly

Ignoring Environmental Behavior Research
by **Thomas Fisher**

Since architecture centrally involves constructing environments for people, why has the architectural community largely ignored environmental psychology, the field that analyzes how well we do in meeting people's needs? Is it that we don't want to know or, even more troubling, that we don't care how we're doing? Or have our various modern and postmodern ideologies gotten in the way, allowing us to convince ourselves that the enormous literature in environmental behavior has little relevance to either the discipline or practice of architecture? And is it time, as architecture has become much less ideological and much more tolerant of difference, to look again at what environmental psychology has to offer us?

A tolerance for difference comes in handy when diving into this literature. For architects accustomed to the visual representation of ideas and information and allergic to data tables and descriptive statistics, environmental psychology, with its dry prose and deadpan graphics, seems to speak another tongue. Likewise, the tendency of environmental psychology to focus on what it can measure as much as what really matters can lead even the most broadminded among us occasionally to ask: Who cares? Yet, once we get past the differences in appearance and approach between architecture and environmental psychology, we will find, like travelers to a foreign country, a great deal to learn about ourselves and our practices.

Understanding "the other," though, rarely happens without resistance. Architects, for example, sometimes complain that environmental behavior research uncovers the obvious, and when you scan the abstracts in the major journals in the field—*Environment and Behavior*, *Journal of Architectural and Planning Research*, *Journal of Environmental Psychology*—you will find a lot that does seem self-evident: Inner city children benefit from green space, windows in the workplace improve job satisfaction, aesthetically pleasing stairwells increase their use, and ventilation affects worker performance.

And yet how much does this claim of obviousness stem from our own desire to avoid facing up to what we, as architects, have done over the last fifty years? What this research really makes obvious is that we have been designing cities without green space, workplaces without windows, offices without adequate ventilation, and stairwells from hell, and this points toward a much broader critique of the architectural community. The work of environmental psychologists reveals an architectural profession that has been too compliant in

On Practice

accommodating the private sector's rush to maximize profits and the public sector's desire to minimize spending. At the same time, environmental behavior research shows an architectural discipline that has been overeager to impose its aesthetic ideologies and utopian visions on others, particularly the most vulnerable among us. No wonder many architects don't want to read this literature.

And those who do may still not be able to, because of its inaccessibility. Much of the findings of this research exist in specialized journals and conference proceedings usually available only in university libraries. In a recent discussion, a number of architectural deans and practitioners from some of the largest firms in the country identified the lack of easy access to research information as a problem that both groups need to address immediately, charging a subcommittee to develop a way of indexing and searching what research exists on the websites of architectural schools and firms.[1] The will to use research exists, but the way seldom does.

The environmental psychology community has addressed the need to make aspects of its work more inviting and accessible. Some researchers, such as UCLA architecture professor Ben Refuerzo and Tulane architecture professor Stephen Verderber, have gone a long way toward showing how environmental behavior findings can be made visually accessible. Computer graphics, digital photography, and desktop publishing have enabled researchers to make their work more appealing to aesthetically oriented readers. At the same time, this research community has developed web-based databases of its findings, bringing what used to sit on university library shelves onto the desktops of designers in their offices.[2]

One of the best of these is "InformeDesign" (www.informedesign.umn.edu).[3] Started with a sizable grant from the American Society of Interior Designers, this database contains concise summaries of the findings of hundreds of research papers, sorted according to space or building types (corporate, health care, residential, retail, etc.), issues (materials, codes, aesthetics, human factors, social factors, etc.), and occupant categories (age, gender, race/ethnicity, socioeconomic standing, etc.) As such databases become more common, their content will undoubtedly be used more, which may lead courts and clients to expect designers to know this information, prompting even more use of the research. This evolving expectation may render the often-assumed demise of environmental behavior research premature. In a knowledge economy, in which information has become the coin of the realm, the relative neglect of research by architects may represent not the avant-garde, but an arrière-garde effort to stave off the inevitable public demand that we know this research.

Nevertheless, many architecture faculty, especially design faculty, dislike environmental behavior research because it seems too deterministic or too simplistic when researchers use the results of their work to drive form-making too directly, without all of the other factors affecting design taken into account. While studio faculty don't hesitate about giving students all kinds of other determinants of form, the neglect of social science research in architecture studios stems from a deeper divide. Environmental psychology has a strong empirical, functional, and instrumental bias, measuring people's behavior in order to change environments to improve our chances of being healthier, happier, and/or more productive. Architectural theory over the last forty years has gone in almost the opposite direction, with an ideological, formal, and skeptical tilt. This has led to a studio culture that focuses on propositions more than measurements, aesthetics more than human activity, and speculation more than demonstration.[4]

Yet even studio culture has not escaped the attention of environmental psychology. Researchers such as Amos Rapoport, Kathryn Anthony, and Linda Groat have examined studio culture itself and critiqued the lack of diversity there, despite all of the lip service paid to difference in such settings.[5] At the same time, environmental psychologists have analyzed the different world views dividing design and social science. As Utah University social psychology professor Irwin Altman suggests, environmental psychologists lean toward what he calls "transactional" worldviews, focusing on the interactions or contexts of people and environments, while designers tend to have "trait" or "organismic" worldviews, focusing on the essences or complex wholes of people and places.[6] The irony here is that if we designers, who often dismiss environmental behavior research, want to understand our own assumptions and behaviors, we have a rich source of ideas and information in environmental behavior research.[7]

Such research doesn't determine what architects do, but it can certainly give us—and clients—reason to do the right things. If anything truly threatens architects' creativity, it is the relentless cost cutting that characterizes public as well as private sector projects. Architects tend to argue against such shortsightedness with generalizations about the effect it will have on people's well being or on the quality of life or the durability of buildings. Environmental behavior research offers another, more powerful argument against clients' corner cutting: its often negative impact on human health and productivity, which translate directly into money losses, which clients care about a great deal.

Consider just a few conclusions drawn from the myriad of research out there. Contrary to the assumption that more unencumbered space increases people's use of parks, research shows that increasing the number of trees does so, especially in and around public housing.[7] Contrary to the assumption that increasing class sizes reduces costs, research shows that crowding too many children together in schools and daycare centers increases instructional and behavioral costs.[8] Contrary to the idea that reduced clutter in offices leads to greater efficiency and better morale, the research shows that clutter and the ability to personalize office space improves worker well being and job satisfaction.[9] Such results show that research can provide architects with valuable tools. When clients want to cut the number of trees, crowd more children into schools, or overly control workspaces, the research shows how these very things negatively affect the most important and most costly aspect of any building: the interaction of neighbors, the productivity of employees, the happiness of children, and the operations of facilities. In not using such information to convince owners to do the right thing, we architects have been just as penny-wise and pound-foolish as the cost-cutting clients we complain about.

This research can also convince architects to do the right thing. For example, some environmental psychologists have begun to emphasize the *natural* environmental aspect of the field.[10] These "ecological" psychologists have revealed the sometimes superficial or ineffective ways in which architects have ad-

dressed environmental problems, tacking on sustainability as if just one more feature of a building. At the same time, this research suggests that we must see human behavior in its largest possible context—the natural as well as the built environment—if we are to understand not only how we behave, but the effects our behavior has on others, human and nonhumans alike. Environmental psychologists have also focused on social justice issues, which get equally short shrift from many architects. By looking at the difference that culture, race, gender, and poverty make in the built environment, this research also provides data to back up the critique of power that underlies so much contemporary architectural theory.[11] Indeed, the degree to which psychologists and theorists address many of the same issues, albeit in different ways, makes one wonder if the widespread neglect of environmental behavior research in architectural theory is, itself, a form of power politics, a type of turf protection that some theorists seem to see everywhere but among themselves.

Not everyone can know everything, and the enormity of the environmental psychology literature can be a deterrent to architects' command of it. Still, that is no excuse for the outright neglect of this research by architects over the last several decades. If nothing else, environmental behavior studies can help us see how much the architecture culture is, itself, an environment in which we behave in often unexamined ways, based on unspoken assumptions, and resulting in unanticipated consequences. Were we to become more self-conscious and self-critical of our own professional and disciplinary culture, we would find that environmental psychology has much to offer, not least of which, like all good psychology, is an understanding of ourselves. □

NOTES

1. AIA Large Firm Roundtable Deans' Forum, April 21, 2004, San Diego, California. I am chairing a task force looking into how research conducted in schools and firms can be made more readily accessible to students, faculty, and practitioners.

2. See Stephen Verderber, *Healthcare Architecture in an Era of Radical Transformation* (New Haven: Yale University Press, 2000).

3. Other databases include that of the Environmental Design Research Association (<www.edra.org>) and Research Design Connections (<www.researchdesignconnections.com>).

4. Studio culture in most schools tends to be ideological, focusing on ideals, and deontological, focusing on students' intentions. In most studio reviews, the attention frequently gets placed on what a student intended to do and how the results did or did not achieve those intentions. At the same time, the research most students engage in involves site-, program-, or precedent-specific inquiries. This often seems inevitable or natural, when in fact it represents just one way of looking at things. Environmental behavior, with its empirical tradition of testing and measuring, and its mode of evaluating actions based on their consequences, offers another, complementary way of understanding.

5. Amos Rapoport and Linda Groat have essays critiquing studio culture in the book *Culture-Meaning-Architecture: Critical Reflections on the Work of Amos Rapoport*, Keith Diaz Moore, ed. (Aldershot, Hampshire: Ashgate Publishing, 2000). Kathryn Anthony has also written a good analysis of the effect of architectural education on women and people of color in the *Journal of Architectural Education* 55: 4, May, 2002, 257–267.

6. Irwin, Altman. "Amos Rapoport: Scholar, Conscience, and Citizen of the Environment and Behavior Field," in *Culture-Meaning-Architecture*, 37–52.

7. Rebekah Coley, Frances Kuo, William Sullivan, "Where Does Community Grow? The Social Context Created by Nature in Urban Public Housing," *Environment and Behavior*, 29: 4, 1994, 468–494.

8. Lorraine Maxwell, "Multiple Effects of Home and Day Care Crowding," *Environment and Behavior*, July 1996, 494–511.

9. Meredith Wells, "Office Clutter or Meaningful Personal Displays: The Role of Office Personalization in Employee and Organizational Well-Being," *Journal of Environmental Psychology* 20, 2000, 239–255.

10. Roger Barker coined the term *ecological psychology* to differentiate his emphasis on the settings in which behavior occurs, as opposed to the typical focus of psychologists on the behavior itself. However, people such as William Ittelson, Harold Proshansky, Leanne Rivlin, and Gary Winkel, among many others, have expanded it to include nature as a behavior setting and an environment dramatically affected by human behavior.

11. Examples of this include research into how urban design and planning decisions have exposed the poor and vulnerable to higher levels of pollution (Robert B. Gunier, Andrew Hertz, Julie Von Behren, and Peggy Reynolds, "Traffic Density in California: Socioeconomic and Ethnic Differences Among Potentially Exposed Children," *Journal of Exposure Analysis and Environmental Epidemiology* 13: 3, 2003, 240–246), higher levels of injury (Robin Haynes, Richard Reading, and Susan Gale, "Household and Neighborhood Risks for Injury to 5–14-Year-Old Children," *Social Science & Medicine* July 2004, 625–636), and higher degrees of isolation and illness (Jennie Popay, Carol Thomas, Gareth Williams, Sharon Bennett, Anthony Gatrell, and Lisa Bostock, "A Proper Place to Live: Health Inequalities, Agency and the Normative Dimensions of Space," *Social Science & Medicine* 57: 1, 2003, 55–69).

THOMAS FISHER is the Dean of the College of Architecture and Landscape Architecture at the University of Minnesota and the son of a psychologist.