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Erratum
The editors of Scroope 15 sincerely apologise for the mis-print in Ptolemy Dean’s article, ‘Commercial Indifference - London and her River’.

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The Role of Environment-Behavior Research in Architectural Education

Kathryn Anthony

The field of environment-and-behavior has been in existence since the 1960's, in large part beginning with the 1968 launching of the Environmental Design Research Association (EDRA). Environment-and-behavior is the study of how spaces and places affect people, and vice versa. EDRA is an international, interdisciplinary organization of design professionals, social and behavioral scientists, educators, and facility managers dedicated to improving the quality of human environments through research-based design. Ever since its inception, this multi-disciplinary area of study has provided an abundance of relevant research for architectural students, educators, and practitioners. I have previously argued that this field has great potential for enriching both architectural education and practice. Nonetheless, today that potential is unrealized. For the most part, schools of architecture around the world have overlooked environment-behavior studies and EDRA. How and why is this so? Additionally, what would be the implications for architectural education if, in the future, this field were paid greater attention?

Most American architectural students graduate with virtually no exposure to this field. Architectural schools that offer environment-behavior courses are few and far between, and schools that actually require such courses as part of their undergraduate or graduate curriculum are all the more rare. For decades, the University of Wisconsin at Milwaukee, home to a well-established Ph.D. program including a concentration on environment-behavior studies, has been one of the few schools to do so. At the University of Illinois at Urbana-Champaign, which has one of the oldest and largest architectural programs in the US, currently one elective seminar in social and behavioral factors is offered every alternate year. Typically, about twenty-five out of a total of 700 students in the School of Architecture enroll in this course, an average of twelve students per year. Each year on commencement day, as I watch our architecture students, decked out in their caps and gowns, parade across the graduation stage, I am struck by how few of them have ever even heard of this field. It is not part of the mainstream curriculum. Indeed, at most architectural schools, no such courses are even offered.

The absence of environment-behavior in required architectural curricula lies in the accreditation process that determines standards to which all American architectural schools must adhere. The National Architectural Accrediting Board (NAAB), which accredits American architectural schools, currently lists thirty-seven criteria used to evaluate each program. Each criterion must be met at one of the following three levels: awareness, understanding, and ability, with awareness being the lowest and ability being the highest level. The criterion for human behavior is listed as follows: "Awareness of the theories and methods of inquiry that seek to clarify the relationships between human behavior and the physical environment." Herein lies a fundamental flaw in the educational system. It is possible for architectural faculty to dismiss this field by claiming that these issues are addressed in every design studio project in the curriculum, while in fact they are not. At most, these issues are given lip service.

Most studio projects assigned at universities are hypothetical, lacking real clients or users. Users are imaginary people regarding whom little understanding or research is required. As such, the critical connection between architectural students and those who inhabit or work in the buildings they design is missing. Thus, if clients and users don't matter; the professional accountability of architecture students' work can be called into question. To whom are they accountable, if not to their faculty, to visiting practitioners serving as guest jurors, and no one else? This internal system of evaluation pulls architectural education farther and farther away from reality. It prompts students to believe that clients and users are irrelevant at best, and at worst, obstructions who interfere with the creation of good design. In this regard, my colleague, Diane Ghirardo, has called to mind the image of mythical warrior Sylvester Stallone in the popular film Rambo (1985). Rambo refuses to yield to authority and possesses an authoritarian
egomania; he lets nothing get in his way. The acceptability of such behaviors and attitudes is implicitly conveyed to architecture students. Bulldoze your way through the design process, shove unenlightened clients and users aside, and your design will prevail. Howard Roark, the protagonist in Ayn Rand's notable novel, The Fountainhead, perpetuated this myth and went on to become the controversial symbol—or caricature, depending upon your viewpoint—of the architecture profession. Getting back to reality and apart from the world of cinema and literary fiction, we have Frank Lloyd Wright, one of the 20th-century architectural profession's greatest heroes. While the groundbreaking qualities of Wright's designs can not be disputed, his antagonistic relationships with some of his clients suggest a questionable role model for students.

Years ago, as part of a Task Force from the Association of Collegiate Schools of Architecture, several colleagues and I were involved in the process of writing the human behavior criterion for the NAAB. Our Task Force spent approximately a year on this process, sending numerous drafts back and forth. Our efforts called for a strengthening of this criterion. In fact, some of our early iterations called upon schools to raise this criterion to the "ability" level. This would have meant that in order to receive accreditation, each school would need clearly to demonstrate that students not only have an awareness of the field, but also a knowledge of its literature and an ability to apply user-needs research findings in their design projects. The specific mechanism by which each school would choose to meet this criterion would vary. However it would not be possible to meet this criterion as it is today—by claiming that every studio does so. Ultimately, by remaining at the awareness level only, the human factors criterion, when compared to other criteria spelled out by the NAAB, has little or no teeth at all.

I would propose the following re-wording of this criterion: "Understanding of the theories and methods of inquiry that seek to clarify the relationships between human behavior and the physical environment and demonstrated ability to apply the findings of environment-behavior research to designed environments." Ideally, this criterion could be met by requiring at least one survey course in environment and behavior in which students are introduced to the architectural literature, theory, issues, research methods, and key research findings, followed by an application of this knowledge in design studios. In order to assess whether or not this criterion would be fulfilled, the accreditation team could evaluate the extent to which these issues are integrated into students' design projects. This could be shown as a series of design research boards that would accompany design projects. Research boards would include a distillation of empirical research described in published literature, as well as small-scale studies relating directly to their design projects that students would conduct.

Another reason why environment-behavior research is absent from most architectural curricula is that faculty members were never exposed to it as students. Without understanding what this field has to offer, architectural educators tend to dismiss it altogether. A generational shift may be needed. Not all faculty members need be experts in this field, but it would be well for all to recognize its value and to support efforts to strengthen the role of environment-behavior research at their schools. A comparison can be drawn with the rapid rise in recent decades of computer technology in architectural education. Not all architectural faculty members are computer experts, but by now many indeed would agree that computers have revolutionized the profession and that if students are to successfully compete in the job market, they must learn to use digital media in school. A similar cultural shift needs now to be made for environment and behavior.

What would be the consequences if environment-behavior courses became a core part of architectural curricula worldwide? What are the implications for architectural education and practice? Student and faculty would view public accountability as a critical component
of their design education. One way to ensure such accountability would be to require all architectural students to complete a minimum number of community service design projects in order to graduate. In consequence of such a requirement, users and clients would no longer remain invisible, but rather, their roles would now be central to the design process. Ultimately this newfound value system would work its way into the profession, leading to more harmonious relationships between architects and their clients. Just as students are required to learn architectural history by analyzing critical works of literature, or structures by examining key examples of building failures, students would also be required to learn about the research of environment-behavior scholars in order to graduate. Many of these works include results of hundreds of user-needs research studies, along with thoughtful design recommendations for specific building types such as health care, housing, and office environments.

Students would learn more about EDRA, the largest professional organization in this field. EDRA publishes a set of annual conference proceedings that span user groups such as: children, teenagers, the elderly, and persons with physical disabilities; issues such as way-finding, user satisfaction, and environmental symbolism; research methods such as interviews, questionnaires, physical traces, observation, and archives, not to mention a wide range of building types. Students would be encouraged to attend EDRA conferences as well as other international conferences of organizations such as the International Association for People-Environment Studies (IAPS). They would be urged to participate in the burgeoning design-research culture by conducting studies of their own, applying them to design in studio courses or in independent design thesis projects—and submitting their work for conference presentations. Such practices are standard in other fields of graduate study and help provide an introductory basis for the next generation of educators as well as practitioners. In fact, after completing introductory environment-behavior courses, several students at my university have pursued specific research interests and presented their work at EDRA conferences. For students, presenting work at an academic conference provides an unusual accomplishment to add to their resume. This experience also opens doors to the research culture, and can be built upon during architects' professional careers.

Students would become well versed in the leading journals in the field such as the Journal of Architectural and Planning Research, Environment and Behavior, and the Journal of Environmental Psychology. The reservoir of information upon which they could draw concerning theory, issues, methods, and design applications would be widened substantially.

Students would critically react to what they will have read in the form of written essays and analyses. As a result, students would learn to become more critical readers and more proficient writers. Improving students' writing abilities would make them much more competitive in the job market and better able to communicate with diverse audiences. Sadly, many of today's architects are hampered by their inability to articulate their thoughts in writing. This deficiency can be traced to the minimal number of written assignments required for graduation from most architectural schools. Compared to students in history, political science, and other liberal arts, for example, many architectural students' writing skills are of limited merit.

By strengthening the role of environment-behavior research in academia, the role of research in architectural practice would be elevated as well. The scope of design problems would be expanded to include a critical examination of who it is each project is for and why the problem has been proposed. The notion of questioning, developing and testing research hypotheses, collecting and analyzing data, summarizing and interpret-
ing results—and, most importantly, understanding and responding to users’ needs—would become integral to the architect’s work. Ultimately, with increased participation in a research culture, the role of architecture within the university setting could become more prominent and less vulnerable to budget cuts.

notes

5 Rand, A. The Fountainhead. Indianapolis, IN: Bobbs-Merrill, 1943.

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