Assigning leadership in a decentralized world of research

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Who are the leaders in architectural research today? One could say that they are, whether practitioner or academician, the individuals who are analyzing the diverse challenges currently facing the profession and responding to these challenges by formulating innovative systems, products and design solutions. It is those, of course, who are awarded federally, AIA, university, or locally funded research grants. However, does leadership in architectural research lie with the individual researcher or does it belong to these funding institutions? Over 70 participants at the conference this year engaged in scholarly discussions regarding the question of leadership. How does one define "leadership" in research? Architectural research today is a complex, multi- and interdisciplinary endeavor. The spectrum of architectural research spans from engineering and the physical sciences, to the social sciences and economics, to the arts and humanities. Leadership can be defined as a single research endeavor that contributes to the development of original knowledge in the field and finds a following in practice, or it can be defined as the establishment of an academic research center or a governing institution for these purposes. Leadership can be found in both the individual and the institution.

This issue of the ARCC Journal presents a selection of 11 papers presented at the 2009 Annual ARCC Spring Research Conference that demonstrate the significant leadership roles both academics and professionals are taking today in architectural research. Members of the conference organizing committee selected these papers for special recognition from amongst 50 authors that gave presentations at the conference, representing 40 universities, research centers, and architectural firms from nine countries. Hosted at the University of Texas at San Antonio on April 15-18, 2009, this year's conference theme invited an exploration of existing and future trends in leadership in architectural research, the impact of these trends on research subjects and methodologies, and how this leadership could foster an integrated research culture. The conference also included a panel discussion addressing conference's main theme, two keynote presentations, and a presentation from the ARCC's New Researcher Award Recipient. Both the keynote and award presentations are included in this issue.

Questioning leadership brought to light specific themes, which we would like to elucidate in this editorial.

Beginning with an historical view on how architectural research has been conducted in the U.S., Avigail Sachs provides us with a glimpse into our own profession's leading institution in her paper on the former Department of Education and Research at the AIA. Sachs describes how the AIA took the lead to create a centralized model for conducting and disseminating research shortly after WWII. This model would have provided American architects with a means to conduct large-scale research projects, potentially on a national level. This endeavor did not succeed in the long run because the scale of financial resources it required could not be met. She tells us that, "...these resources were, as a matter of policy, scattered across institutions within the military-industrial complex." The U.S. government's policy was, and still is, to support decentralized research endeavors, essentially research done by individuals and teams at American universities. In essence, the potential leadership of the Department of Education and Research was eclipsed by academia. Sachs notes that the decentralized model is still with us today, and is not without benefits. Although the potential for large-scale research projects is not on the agenda, we have maintained greater freedom in the subjects and direction of research.

Just as in any professional practice, a lack of leadership or conflict within leadership is going to harm the business' prosperity. Lisa Tucker provides an enlightening example of what happens if neither practitioners nor academics take a leadership role in an important aspect of the built environment---the housing industry---in her paper on the Architect's Small House Service Bureau (1914-1942). Tucker found that the reason why so few architects are involved in the singlefamily housing market today is directly related to a conflict between early 20th-century Northeast versus Midwest views of the purpose of the profession. The decision of vocal members of the AIA (Northeast) to eschew involvement in the publication of house plan books, specifically those designed by the ASHSB, was irrevocable. In this historic moment, architects lost their only grip on and increasingly decentralized industry.

However, looking at the profession as a whole, one has to question whether a centralized model would have been the most effective means for developing leadership. The fact is, as Sachs noted, the state of research activity and funding today is decentralized, and yet numerous examples of innovative leadership

models have evolved. As Stevens, Plowright and Adhya have noted in their paper on models of architectural research, "There are currently 95 centers of applied research in the 57 architecture memberschools of the Architectural Research Centers Consortium." The productivity of these ARCs and that of individual researchers today is evident in the recent proliferation of architectural research journals, including the present one, for the publication of their findings.

John Carmody's promotion of the regional ARC as a hub for research and dissemination of regionally specific types of knowledge is a timely example of the effectiveness of our decentralized model. In his paper on the role of ARCs in addressing climate change, he gives us an example of a research center connecting academic research to practicing architects, the building industry and local government. These regional centers, in essence, have the potential to accomplish what the historic AIA Department of Education and Research set out to do, but on a region by region or issue by issue basis. The Center for Sustainable Building Research at the University of Minnesota, as described by Carmody, assists local governments in writing policy, develops tools and literature to assist design decision making, and provides technical assistance and public education.

An alternative to the regional or subject specific model for organizing larger research endeavors is best represented by the SYNCH Research Group described by Jim Stevens, Philip Plowright and Anirban Adhya in their paper on rethinking models of architectural research. SYNCH is an association of academics, professionals and consultants who, rather than focusing on architecture as an object, view it as a complex system. Research is conducted in a collaborative, intellectual space devoid of the typical financial and physical constraints of object-based, client-based design. Research results are made available to the profession according to the "open source model" of software development. This model for architectural research operates neither within a university nor within private practice, but is an independent non-profit that provides a service to help integrate the two.

The legacy of the AIA Department of Education and Research is that it provided a model for shared leadership responsibilities between the academy and the profession, which is still promoted today. The AIA instituted the Board of Knowledge Committee in 2004, which initiated two research grant programs, the RFP and the Upjohn Research Initiative. The RFP funds university research, whereas the Upjohn provides matching funds for applied research by teams of academics and practitioners. This notion of 'collaborative research' is the buzzword on university campuses today.

The majority of architectural research to-date has been based in universities and is subject to their research

policies. These policies guide and shape the content and focus of research today. The question is, exactly who is responsible for developing this research policy? In general, most policies are developed by federal or state governments, which in turn pass this policy down to university administrators. These are associate vice provosts for research, college deans, associate deans, and department chairs. It is those university administrators that choose how research policy will be implemented. They are in a position to take leadership in the direction of research. Have university research policies been effective in promoting a collaborative environment, in which academic and professionals can work together? At a minimum, knowing the research policy at our own university, we would say yes.

Who are the leaders shaping academic research policy in the field of architecture? An interesting perspective is presented by Margaret Dale Woosnam on women administrators in architectural education. Woosnam presents a qualitative case study of ten women administrators, which revealed that women leaders in male-dominated fields have characteristics distinctly different from female leaders in other contexts. In Woosnam's terms, they are "built leaders", leaders who have had to fight their way to the top, but once there employ non-traditional forms of leadership that focus on collaboration and networking, rather than a hierarchical or top-down managing style. This new leadership style mirrors and supports the new emphasis in university (and architectural) research programs, collaboration.

Recent decades have witnessed a notable expansion of architectural research activities, with respect to both subject and methodology. This expansion can be mostly credited to an increase in government and private funding of primarily academic research initiatives. More recently, however, a noticeable increase in research activities within the architectural profession makes it possible to argue that it is the profession itself that is now taking leadership in the development of contemporary research agendas. In order to provide a national forum for emerging research agendas in the profession, the AIA in 2007 hosted a national research summit, perhaps the first of its kind not occurring on a university campus.

Engaging research in professional practice is an essential factor in facing these challenges as well as taking full advantage of the opportunities they offer. For applied research to be most effective, however, a more clear definition of its purpose and integration into the professional office are needed. There are abundant examples of effective collaborations between academics and professionals today. Perhaps most exemplary is the work done by Mardelle Shepley with the firm Anshen+Allen in San Francisco. Shepley, as university researcher, collaborated with two design professionals in this firm, Mara Baum and Bill Rostenberg, in order to investigate the conflict between two seemingly opposed approaches to healthcare design, evidence-based and eco-effective design.

Through a systematic series of surveys they collaboratively developed and administered to best-practice healthcare institutions, they discovered that fundamentally these two approaches were not at odds with each other and could be used simultaneously. This study clarified the potential contribution of cooperative research efforts between academics and the profession. The three authors report that healthcare designers are interested in research partnerships that support their informational needs.

The growing significance of architectural research is ultimately a response to the diverse challenges facing the profession; most notably the issue of environmental sustainability, but also including the rapid pace of technological change, the increased diversity of users, and the growing complexity of architectural projects. The decentralized model of research allows more freedom in choosing the direction of research and in responding to these challenges. The following papers discussed below represent models that are collaborative in innovative ways and are bringing a heightened sense of professionalism to the field of architecture.

In a decentralized world of research activity, how can we improve communication and dissemination of knowledge and innovation, beyond its publication in academic journals? The AIA has established the Architect's Knowledge Resource, a database of the most current information on architecture, which is available to AIA members. Also, numerous architectural research centers and consortiums have established their own on-line databases publications in the past decade. Leonard Bachman was given the ARCC's award for Best Paper in the conference, for his innovative proposal architectural knowledge can be accumulated and utilized as a clinical database, much as knowledge is used in the practices of law and medicine. database would be comprised of clinical knowledge detailed technical and qualitative - accompanied by building case histories, which would be categorized into four general disciplines and made available to all academics and professionals. Bachman suggests that leadership in the formulation of this database belongs with the research facilities in university settings, the most publically accessible venue.

This new clinical database would be an excellent venue for the documentation and publication of building case studies. Keelan Kaiser provides one such example, which exemplifies the importance of these documents for the evolution of design knowledge. Kaiser presents a year-one post-occupancy evaluation of a recently completed university building's energy efficiency in terms of its original design intent. Post-occupancy evaluation is demonstrated as a critical tool for monitoring and troubleshooting the innovative ventilation design of the building, atypical for its climatic context.

Bachman's proposed clinical database can and should be extended from architectural knowledge to the urban context. Jeffrey Vaglio has identified a solution for the rapid pace of technological change on the periphery of American cities in his paper on urban densification along the Los Angeles River's Rio Hondo Confluence. Taking a mostly dry, now concrete-encased riverbed as an opportunity for urban revitalization, Vaglio developed a prototype to demonstrate how a colliding river and freeway exchange might become a key organizing feature for multi-use development and to develop a positive community identity.

Two of the selected papers present collaborations between academic researchers and the subject of the research itself. University researchers in Finland, H. Teräväinen, A. Staffans and R. Hyvärinen, worked directly with a client, a non-profit organization. This investigation, InnoArch, was one part of a four-pronged effort to develop a set of best practices for the Future School. InnoArch focused on the physical environment of learning. The research team conducted a series of workshops with the teachers and students, asking them to design physical models of the new school and its learning spaces. The process was video-taped, in order to document and observe the children's design process. The results show the kinds of learning environments the children themselves desire.

Karen Keddy developed an innovative research method to collaborate with her subject, the nurse practitioner in the workplace. Her study diverges from traditional healthcare facility analysis by shifting the focus on the hospital as a place of healing to a place of work. Keddy also diverted attention away from the typical study of worker efficiency and productivity to the nurse's experience of her daily activities; the objective was to analyze workplace design in order to improve the nurse practitioner's sense of professionalism and "getting the job done". Her study demonstrates the value of direct observation of physical activities in the workplace, as opposed to evaluating the worker's or administrators perceptions of how space is used.

Several themes consistently emerged through these papers as well as in discussions at the conference. These included the need for: 1) effective models of leadership in both academia and the profession, 2) increased collaboration between academics and professionals, 3) more consensus in defining architectural research and identifying and developing its research methods and tools, 4) a voice in the development of research policies, objectives, and funding priorities, and 5) improved means of dissemination of and accessibility to knowledge. The papers presented here exemplify the state of these issues today. Our national decentralized model for research appears to be working well, yet it is true that we are currently operating in a piecemeal fashion, often regionally or university-to-university reinventing some parts of the wheel. We believe there could there be more power in a centralized repository of knowledge,

such as the one suggested by Bachman, as well as a forum for the discussion of leadership, policy, collaboration and dissemination of research. Several networks currently exist, yet there are still no centralized means of communication and coordination within these networks. The only central point of contact within the profession is the AIA. However, the AIA's connection to the academic world has been tangential, at best. How do we capitalize on our collective situation? Perhaps the answer lies in the current, and promising, efforts to establish National Academy of Environmental Design.