Toward a Discipline-Dependent Scholarship

This article explores the relationship between design and research, and design and scholarship. It argues that merging design and research is untenable since each activity embodies a different epistemological perspective and set of values. More importantly, overtly integrating design and research diminishes the most important aspects of each activity. Instead, designers should characterize their work, and the knowledge that it uses and produces, as an intellectually separate but complementary counterpart to research. In doing so, designers take the first step toward developing a discipline-dependent scholarship whereby the discipline itself determines what constitutes knowledge and consequently what qualifies as scholarship.

Introduction
It is becoming more common among design faculty members and administrators to ask if design is research and if design is scholarship. These are important questions to ask within the ever-changing academy since research and scholarship lead to recognition, publication, and experience, three keys to tenure, promotion, and funding. In colleges and schools of design, these questions take on a special meaning since many designers are more competent as architects and landscape architects than they are as researchers. In other words, designers and design faculty members publish and receive recognition for their teaching and practice, rather than for their research, as most institutions conventionally define it. This has led many designers to argue that what they are doing is really a form of research and, as a result, designers are just as scholarly as scientists, engineers, and other individuals from scientifically oriented disciplines.

This article, by contrast, argues that merging design and research as commonly defined within academia is epistemologically counterproductive and undermines the best, most valuable aspects of both activities. In this view, designers should promote design as a separate activity but a useful counterpart to traditional research. Furthermore, commingling design with research does not ensure scholarship, since scholarship is neither bound nor dependent upon conventional research. Instead, as this article contends, the design disciplines should themselves attempt to articulate and advance the methods and values that support a discipline-dependent scholarship. A discipline-dependent scholarship, when organized, practiced, and promoted appropriately, is not only compatible with the traditional view of scholarship but also extends the traditional view to include what Ernest L. Boyer calls the scholarships of discovery, integration, application, and teaching.

Scholarship: A Function of Knowledge and Know-How
In 1959, Miles Davis walked into a New York City music studio and presented his band with a series of sketches. The sketches represented abstract frameworks in time intended to structure the band’s improvisation. The session resulted in Kind of Blue, a milestone album that captures not only the spontaneity of jazz at that moment but also embodies, in process and product, the integration and application of history, culture, and knowledge.
Since Davis used his knowledge to design the music’s framework (Figure 1), improvised and reflected while, as Donald Schön says “in action,” and published the results in the form of the album, then was Davis engaging in scholarship? Is Miles Davis a scholar?

Most people would probably consider Davis to be a scholar of sorts, because he uses and produces knowledge, shares his knowledge with others, and practices his craft with the intellectual rigor and methodological structure of a scholar. However, most people, including Davis himself, do not work within the framework of a university where the traditional view of scholarship, imperiously bound by convention, would require Davis to “make research” out of his music in order to be considered a scholar. Fortunately, Davis is not judged by academic convention; instead, he is judged by jazz, a creative and often unconventional discipline that recognizes him as a scholar because of his knowledge, or more accurately his “know-how.”

The notion of Miles Davis as scholar parallels the idea that Frank Lloyd Wright (Figure 2), Roberto Burle Marx (Figure 3), and other designers, not to mention teachers, artists, and athletes, can be scholars based on their discipline-dependent knowledge. For what these disciplines share, at least within the academy, is an unconventional view that what constitutes research and scholarship includes art as well as science, heuristics as well as facts, and specificity as well as generalizability. Underlying these views is an equally untraditional notion that tacit knowledge and experiential knowledge are just as valuable as the epistemic hallmarks of science, that of declarative knowledge and fact. The value of tacit and experiential knowledge is evident whenever musicians play and architects plan, activities that not only use knowledge but also engender knowledge, resulting in contributions to society that influence history and culture in profound ways. Thus, disciplines rather than universities define knowledge. In doing so, a discipline qualifies what constitutes scholarship and certifies scholars based upon its own epistemological terms.

The unconventionality of the designer’s views on knowledge in contemporary higher education...
does not necessarily diminish its value to history and culture. Instead, well meaning designers and faculty members diminish the value of design by arguing, counterproductively, that design is something it is not, indeed something it should not aspire to become: research. There are three reasons, resulting from epistemological difference, why design and research should remain separate. First, morphing design and research results in a Frankenstein’s monster of sorts, whereby beauty and fact devalue each other. The morphing essentially lessens the best, most valuable aspirations of each activity. Second, design cannot be research since it does not sufficiently address, if at all, several critical components of research including validity, reliability, replication, and generalization among others. These components are simply not key considerations for designers who are more interested in creativity, form, synthesis, problem solving, and most importantly, making. Third, any discipline has a right to define scholarship on its own terms, but only those disciplines that engage in research, even loosely described, can redefine research. In other words, since most architects do not do research, architects should not attempt to redefine research just as scientists should not redefine design.

**Design and Research: Differences, Not Deficiencies**

The goal of research is new knowledge. Researchers are not concerned with solving problems per se, but providing others with the knowledge and information that will help them to solve problems. Providing knowledge to solve problems is the most important function of research. This means that from a research perspective, questions regarding design as research inevitably lead to epistemological questions as “where does design knowledge come from?” and “how does design contribute new knowledge?” The answers to these types of questions depend, of course, on how you define knowledge, a function of discipline.

Most researchers in universities today tend to view knowledge as truth. In this view, knowledge is about more than learning something new or answering a question. Knowledge, for researchers, is about ensuring that the findings or results of their research are valid, reliable, and generalizable. The researcher’s methods, including the collection, measurement, and analysis of data, is highly structured and requires rigorous standards in order to make certain that the results of a study essentially qualify as truth. While this is a scientifically oriented view of research and knowledge, it nonetheless represents the most important aspiration of research—giving us the facts.

Most designers, on the other hand, tend to view knowledge as experience rather than fact. In this view, knowledge is also more than learning something new; it is about an understanding accumulated over time through careful observation, intuition, and reflection upon and during regular practice. This type of knowledge differs from that of the researcher in that experiential knowledge does not necessarily carry with it the same kind of validity, reliability, or generalization. This is not to say that experience cannot be truth, but rather that

<table>
<thead>
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<th>Values</th>
<th>Design Emphasizes...</th>
<th>Research Emphasizes...</th>
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<tbody>
<tr>
<td>Knowledge</td>
<td>Tacit, Experiential</td>
<td>Declarative, Authoritative</td>
</tr>
<tr>
<td>Truth</td>
<td>Form, function, fitness</td>
<td>Facts and evidence</td>
</tr>
<tr>
<td>Theory</td>
<td>Self-generated conceptual framework</td>
<td>Externally-generated theoretical framework</td>
</tr>
<tr>
<td>Thinking</td>
<td>Abstraction, creativity, flexibility</td>
<td>Hypotheses, concreteness, structure</td>
</tr>
<tr>
<td>Functions</td>
<td>Making and problem solving</td>
<td>Analyzing and problem finding</td>
</tr>
<tr>
<td>Approach</td>
<td>Qualitative, general, often messy data from diverse sources</td>
<td>Quantitative, specific, often numerically-based data sets</td>
</tr>
<tr>
<td>Data Collection</td>
<td>Individual or small teams, cameras, drawings, notebooks, etc.</td>
<td>Non-human measuring devices incl. meters, gauges, questionnaires, etc.</td>
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<tr>
<td>Experience</td>
<td>Reviewing relevant precedent and models</td>
<td>Reviewing relevant literature and research</td>
</tr>
<tr>
<td>Application</td>
<td>Single case, site specific</td>
<td>Representative sample, population specific</td>
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4. Value comparisons between design and research. (Matthew Powers.)
declarative knowledge and fact, as values, are not essential for designing. For designers, knowledge is experience and experience facilitates the process of design. The designer’s goal, in contrast to the researcher, is making plans and solving problems rather than collecting and analyzing data in order to impart new knowledge. Figure 4 summarizes key differences between design and research.

Toward a Discipline-Dependent Scholarship

A discipline-dependent scholarship holds that since knowledge is defined within a discipline, rather than externally, scholarship is also defined by discipline. There are four key steps toward developing a discipline-dependent scholarship (Figure 5). First, a discipline must understand and explain its basic epistemology. This begins with a close examination of past and present scholarship. Second, a discipline must codify its beliefs and values through the creation of a written document or framework. In doing so, a discipline essentially reaffirms what its scholars believe constitutes knowledge and consequently reinforces the nature of scholarship in their field. Third, a discipline must practice within its self-generated framework. This means coherence with its own value system while respecting the values of other disciplines. In addition, when an individual works within a framework that is associated with another discipline, he or she must adhere to the prevailing value system, that is, if the goal is knowledge and scholarship. Finally, a discipline must promote its knowledge through appropriate venues. In other words, knowledge must be shared, but it is the discipline that decides how knowledge is best shared. This includes traditional forms of sharing such as publication, but also allows teaching, built works, and albums to be considered viable scholarly formats for sharing knowledge.

Conclusion

Donald A. Schön contends in “The New Scholarship Requires a New Epistemology” that design and research occupy different but equally valuable epistemic poles and, as a result, the practice of design is often relegated to something less than scholarship. However, by developing a discipline-dependent scholarship, artists, designers, and others take an important first step in recognizing the reality that scholarship can have different forms and that disciplines rather than convention define scholarship. Through the development of a discipline-dependent scholarship, design moves away from the shadow of science and toward its appropriate place within academia.

Notes

1. For this article, design is considered that area of human skill and knowledge which is concerned with man’s ability to mold his environment to suit his material and spiritual needs. See B. Archer, The Need for Design Education (The Royal College of Art, 1973). While there are many different types of designers, this paper is primarily referring to architects and landscape architects though it does not preclude any particular designer.
2. Among design faculty and administration, the underlying push for reconsidering how design compares with research and how design might be considered scholarship comes from the pressures of prestige, funding, and even as Schön says “…a nagging sense of inferiority in relation to those who present themselves as models of technical rigor.” Donald A. Schön, “The New Scholarship Requires a New Epistemology,” Change 27 (6) (November/December 1995): 28.
3. Conventional research refers to research that originates from a scientific perspective. Conventional research is best defined in terms of knowledge, method, and values rather than by discipline.
4. “Design disciplines” refers primarily to architecture, landscape architecture, industrial design, interior design, and other studio-based academic programs that engage in designing as both pedagogy and practice.
5. Traditionally, scholarship includes conventional research, publishing, and to a lesser degree funding. Some disciplines, chemical engineering for example, strongly support traditional scholarship since research in chemical engineering is mostly conventional, published in some way, and well funded. This does not mean that chemical engineers are inherently against nontraditional forms of scholarship such as teaching, nor does it mean that they devalue tacit or experiential knowledge associated with design; it only means that chemical engineers will have a problem supporting nontraditional scholarship since it does not fit within their epistemological framework.
6. “Making research” refers to the suggestion, by many traditionally oriented individuals, that teaching, design, music, or other artistic activity is interesting but lacks a research component. In this case, Davis might use a “scream-o-meter” to test audience enthusiasm or distribute questionnaires to find out how his music worked on a particular night.
8. For this article, truth is referring to fact or evidence-based beliefs.
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