PUBLIC INTEREST DESIGN: A VEHICLE FOR CHANGE IN ARCHITECTURAL EDUCATION AND PRACTICE

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During the first decades of the twenty-first century, public interest design is growing in the architectural profession and the academy, creating opportunities to bridge the education/practice divide while also expanding the scope of architectural practice and comprehensively preparing students for practice. This paper examines how public interest design effectively achieves many existing goals of architectural education while also proactively and systemically addressing civic issues, using the built environment as an instrumental force for socio-economic and environmental justice.

In their much-referenced 1996 report on architectural education, *Building Community: A New Future for Architecture Education and Practice,* Ernest Boyer and Lee Mitgang discussed the struggles and potentials of professional architectural education in the United States. Their report repeatedly returns to the potential of publicly engaged models of education and practice for creating both more integrated models of education and more relevant forms of practice, stating that "educating architects not only for competence but also for civic engagement is surely one of the highest priorities for architecture schools in the coming years."[1] Examples of student work from the Bridge Studio at Iowa State University illustrate how Boyer and Mitgang's charge can be achieved by involving students in public interest design projects that not only integrate a broad range of knowledge and skills but also develop critical communication and leadership abilities that they can then carry into their professional lives to expand the relevance of architecture as a profession.

CHALLENGES IN 21ST CENTURY ARCHITECTURAL EDUCATION

Boyer and Mitgang described architecture as a social art "whose purposes include, yet transcend, the building of buildings."[2] While they found that teamwork and diversity of practice had begun to permeate the profession, there nevertheless remained a pervasive image of architects as lone creatives à la Howard Roark, upholding architecture as the "queen of the arts."[3] As a result, there continues to be a conflict between the potential future of architects as leaders in a society facing complex socio-economic and environmental issues and the image of the architect as a privileged sophisticate using aesthetic skill to serve the upper echelons of society. Within architectural education in particular, this plants "the seed of self-doubt and the lack of a clear vision of what the architect can and should do."[4]

As Dana Cuff discussed in *Architecture: The Story of Practice*, architecture schools indoctrinate students into the language and tacit knowledge of the profession. This traditionally emphasizes individual, formal production and pays minimal attention to the collaborative, economic, and power relations that are critical components of all architectural practice. As Cuff discusses, architecture students become cliquish and self-referential as they begin to embody professional values "such as the principle of peer review and a developing segregation from the general public."[5] In practice, this "tends to distance the architect from the laity, both the clients and the public at large" because the architect has not learned to negotiate how formal and aesthetic priorities can be interwoven with issues of economic, social, and political power.[6] Because architects' fees are typically a percentage of construction costs our work is part of a value system that emphasizes economic costs and benefits while neglecting "things of value that we cannot easily quantify." As a result, we create a built environment that embodies short-term economic gain but "does not always capture what we value as a community, society or culture."[7]

Architecture is, nevertheless, an inherently social practice. "What is missing, and could point the way for the profession's next evolutionary phase, is attention from the (academic and professional) institutions to the social art of design."[8]

Calls for Change

Scholars of architectural practice and education repeatedly call for a broader public agenda that goes beyond form-making, technical problem-solving, and serving the wishes of private clients to help "foster, through design, more wholesome neighborhoods, safer streets, more productive workplaces, a cleaner environment, and more cohesive communities."[9] This shift is needed not only to serve a broader range of people but is also essential to the future of architecture as a profession. We are uniquely trained to address multiple complex interrelated issues, making us perfectly suited to become leaders in addressing issues of global warming, increasing urbanization, growing disparities between rich and poor, and the implications of the global economy. To do this, however, requires a change in the social structure of architectural practice and education. As David Perkes from the Gulf Coast Community Design Studio discusses, this kind of change, unlike technical change,

requires significant effort because it is not built into the capitalist building industry. Like public health, it requires improved public access to design services and the preventive tackling of underlying problems with the built environment that lead to inequities.[10]

The 1967 "Princeton Report" sponsored by the American Institute of Architects (AIA) called for an educational system for architects that would not only develop practical competence but also prepare students to work within and even thrive upon "the continuing changes in the social, economic, scientific and technological setting of our society," thus preparing them to create new frameworks for practice, society, and the built environment.[11] Civil rights leader Whitney Young subsequently called attention to the need for a social shift in architecture when he said at the 1968 AIA Convention,

> "You are not a profession that has distinguished itself by your social and civic contributions to the cause of civil rights, and I am sure this does not come to you as any shock. You are most distinguished by your thunderous silence and your complete irrelevance."[12]

Sociologist Robert Gutman identifies an essential conflict within architecture as "the only profession that straddles the worlds of the fine arts and the service industries." For Gutman, architecture struggles for identity between its strong social position as an art versus its weaker position as a technical profession. It also struggles for identity between individual creativity and collective service. To resolve this conflict and socialize young architects in the direction of social prestige, "many schools… still go out of their way to teach design on the individualistic model and to exclude pragmatic concerns… as central concerns of the studio." Gutman goes on, however, to identify this ambiguous condition as "central to architecture's existential condition" and a source of vitality for the profession.[13] This suggests that architectural education should likewise embrace the contradictions of architectural practice rather than focusing in one direction or the other, making public interest design a perfect vehicle for teaching students about balance between creativity, service, and pragmatics.

Boyer and Mitgang's report presents seven goals for architectural education and practice that look beyond promoting "the competence of future architects" in order to "lead the profession into more constructive engagement with the most pressing problems of our communities, our nation, and our planet."[14] While all seven goals are interconnected, three of them specifically address the relevance of public interest design to architectural education and practice. The "first and most essential goal" is to create an enriched mission that better connects schools and practitioners to the "changing social context."[15] It is important to note that this is a *changing* social context, suggesting that students need to be not only prepared for current conditions but be able to adapt to unforeseen future conditions.

Boyer and Mitgang's fourth goal promotes a "better connected" curriculum that connects architecture to other disciplines, integrates different types of knowledge, and better connects education to "the changing needs of the profession, clients, communities, and society as a whole."[16] The final, seventh goal similarly urges preparation for "civic engagement" and "service to the nation" by both establishing a "climate of engagement" and effectively communicating the value of design to the public.[17]

More recently, activist practitioners like Bryan Bell of Design Corps have brought attention to the need for more architectural engagement in "new models of practice (that) can effectively reach the unserved populations and expand architecture's impact in society." Bell describes activist practice as engaging not only form-making but also pre- and post-form-making roles that enable architects to participate in identifying issues and articulating problems that formal design can then address. Built projects can then be evaluated in terms of how well they address the initial issues, creating a spectrum of involvement that is much broader than building design alone. Working with underserved communities and organizations furthermore requires this kind of involvement, providing expanded areas of engagement for both practice and education.[18]

Thomas Fisher, Dean of the College of Design at the University of Minnesota, has also called for a design practice akin to public medicine that could focus on both satisfying direct needs such as shelter and sanitation as well as addressing long-term preventive tactics for creating a built environment that would promote a healthy, equitable society with good quality of life for all.[19]

While these are just a few of the academic and professional voices that have called for a greater incorporation of public-interest design in architectural education and practice, perhaps the strongest voices for this shift have been those of students. Gregory Palermo's study of 165 entering undergraduate architecture students identified socially-oriented motivations for entering architectural study for nearly forty-five per cent of the students. Forty per cent identified individual creativity as a motivating factor, typically associating this also with social benefit and improving quality of life.[20] This desire of students to study architecture in an engaged way reflects the increasing number and popularity of studios and courses involving "real" projects and service to "real" communities. This work ranges from one-semester design/build projects for individual houses in low-income neighborhoods to multi-year studies of regional connections between environmental degradation and rural poverty. Throughout these projects, architecture is constructed as a combination of aesthetics and pragmatics, creative vision and service, and most importantly as the result of partnerships between designers and communities.

PUBLIC INTEREST DESIGN PEDAGOGY

Typical architectural education uses methods of instruction, experimentation, and testing to prepare students to enter traditional architectural practice in which architects' primary task is to develop formal and functional solutions for building programs that have been pre-conceived by paying clients.[21] Students are rarely engaged in defining project scope; this falls to the instructor, who acts as a mock client within the studio. Instruction occurs primarily

in "support" courses that deal with specific technical or historical information, building students' formal and typological vocabularies. In these contexts, students are typically passive, learning facts and techniques from lectures. Understanding building type from historical or technological precedent can be an important part of this type of learning but is typically focused on the building in isolation or in relationship to very limited physical context.

Experimentation and testing are more active and more typically used in the design studio but they tend to focus on form and performance of the building itself. For example, a student may create multiple formal iterations of a building's massing in response to various criteria. She may then test these iterations for solar exposure, for example, to eliminate forms that do not fulfill a required technical criterion. This then generates subsequent rounds of experimentation and testing, perhaps adding new criteria as the project progresses. This experiment/test process is at the core of architectural education and will always be of great importance. When studios do not, however, move beyond studies related to building form, including technical studies like the solar exercise described above, they do not engage what Bryan Bell's "pre-form" and "post-form" design that "help(s) to define problems and locate opportunities where design has the potential to change the lives of individual people and communities."[22] In public interest design projects, students spend a significant amount of time identifying needs, defining issues to be addressed, and setting project goals so that the specific building design can engage a broad range of socio-economic and environmental needs within the community. This in turn prepares them to work with a broad array of potential partners and to be involved in a much larger scope of work than typical practice.

Without pre-form and post-form design, the architect's work is restricted to "come late and leave early" project phases that leave her subject to the project goals established by clients and trade professionals like construction managers. In addition to project definition, there are many other critical components of design practice that are not present in most design studios and are therefore encountered for the first time when students become interns. Budgets, schedules, and client communications are some of the most important aspects of any architectural project that are rarely encountered in school. As a result, these can be stumbling blocks for young architects who do not know how to incorporate what they have learned about design in school into the world of pragmatic requirements and conflicting interests that is typical of any project. Public interest studio projects provide opportunities for students to engage many of these situations while still within the reflective environment of the academy. They furthermore help students understand the wide base of people with whom they can partner in the future and demonstrate how to create a practice that will support this type of engaged and integrated work.

Project Definition and Goal-Setting

Defining what the project is and what its goals are is a critical component of any outreach-based education experience. For architectural education, this means "learning to define problems, asking the right questions, and weighing alternative approaches," all of which "must be at the heart of architecture study."[23] This is a task for which architects are particularly well-suited because, as Julia Bourke describes, architects are "generalists trained to synthesize multiple constraints into a coherent whole," making us well-suited for key roles in not only solving but also defining problems and priorities.[24]

While many community partners may initially have specific building types or images in mind for their partnerships with architecture studios, these are frequently specific material expressions of what Robert Gutman describes as "nonmaterial culture," the "values, beliefs, norms, traditions, and all the other habits and ideas invented and acquired by man as a member of society."[25] The architect, in this case the students, needs to get beyond the specific material expressions and identify the key underlying values that the community is expressing so that the project can go beyond aesthetic specifics to address these values on multiple levels. These can then be used to frame a broad set of goals for the community against which a range of design ideas and formal approaches can be tested.

This pre-form part of design work shows students how their abilities to integrate technical, social, and aesthetic knowledge can make connections between diverse issues while also creating inventive solutions to problems. For example, in the Time Check neighborhood of Cedar Rapids, Iowa many residential lots were abandoned following severe flooding in 2008. The yards were becoming overgrown nuisances and derelict houses were both hazards and eyesores. The neighborhood was anxious to return to its pre-flood state with tidy homes and lawns built to the edge of the river, but this was not allowed because of revised flood plain maps. The situation was creating conflicts between neighbors and between residents and the city government as people could not envision how their neighborhood could be anything other than a derelict wasteland if it did not return to its pre-flood status.

Students in the spring 2012 Bridge Studio at Iowa State University worked with the non-profit organization Matthew 25 and design firm OPN Architects to design a prototype urban farm for two acres of open land in Time Check that had once been occupied by houses. The farm became not just a way of using the space productively but also a new center for the neighborhood with play areas and a community shelter. Called "Cultivating Hope," the farm will not only produce Community Sponsored Agriculture (CSA) shares but will also be a center for environmental education and community gathering. Developed in partnership with the City of Cedar Rapids through a zoning amendment, the farm is also a new type of urban land use within city boundaries in Iowa, setting a precedent for the state.

During initial student meetings with neighborhood residents, community goals were stated in specific material language such as, "fill in empty lots with new houses" and "we need more white picket fences and nice lawns." Eventually, as discussion was redirected to

Figure 1. Iowa State University students meeting with Time Check neighborhood residents, local design professionals, and members of non-profit Matthew 25 in Cedar Rapids, Iowa, October 2011.

qualities and memories of the old neighborhood, the goals could be rearticulated as "create a sense of stability, cohesiveness, and energy in the neighborhood" (Figure 1). Subsequent design work was then done in support of these goals with the goals providing a frame for the experimenting and testing of design alternatives typical of any design studio. Unlike the self-generated concepts typical of many previous studios, students in the Bridge Studio commented on the sense of commitment they had to the goals that were established by the community members. They were developed in partnership and everyone was thus committed to respecting them. At the ribbon-cutting for the urban farm in April 2012, resident Heather McCauley Buenzow described how her grandmother's house had stood on one of the urban farms lots, "she would be so happy to see a garden and vegetables and food that could help a lot of people in our community. She would be so happy to see it like this."[26]

By working in partnership with a community organization, architecture students can learn how to identify nonmaterial values to serve as foundations for collective project definitions and goals. These kinds of interactions require a range of verbal and graphic communication skills including both listening and speaking using nontechnical language. Doing this brings out the larger issues at work in a community and helps the students see how a specific design project can connect to a larger system within the built environment.

Communication and Collaboration

When working with communities, students learn the value of effective communication and the importance of collaborative work. In the Bridge Studio, students typically work in teams ranging from two to five individuals, often in partnership with interns from local design firms (Figure 2). While student teams sometimes pursue simultaneous designs of the same part of a project, more frequently they organize around the diverse parts of a project based on student interests. Team members may be from multiple disciplines including architecture, landscape architecture, and interior design and the students must initially establish a common language, both verbal and graphic, to cross disciplinary boundaries. Doing this reflects the type of work architects must frequently do when working with project consultants from a range of engineering, design, and building professions. In addition and perhaps most importantly, students must state clearly and in plain language what they mean rather than relying on discipline-specific lingo.

Figure 2. A student team in the spring 2008 Bridge Studio meet with their intern partner from a local architecture firm to discuss project options.

Architectural education emphasizes the acquisition of specific professional language that is typically used to present work to faculty and practitioners. This "secret language" contributes to the profession's sense of exclusiveness stemming from the Beaux Arts desire to elevate architecture as an aesthetic profession above technical trades and professions. At the same time, using this kind of language excludes those who have not been indoctrinated, contributing to the public's sense that architecture is only for a select few and not relevant to their ordinary lives. Community partners for public interest design projects are often different from both students and instructors in terms of race, class, and so on. The students must thus "develop empathy with their community partners so that they are able to 'see the world' through their eyes as well as take into account a variety of perspectives."[27]

Structured focus groups and design charrettes as well as casual conversations over potluck dinners are integral to the trust-building part of public interest design. In all of these situations, the architect's primary role is as a listener. Later on in the project, the students need to demonstrate that they have listened and incorporated the community's thoughts into the project. Explaining this using

the community's words not only makes the design easier to understand but also validates their ideas. In working with underserved communities, this is a particularly important role for the architect as the community may feel overlooked and undervalued and, by bringing their ideas to life, she gives them voice and value.

Figure 3. Students in the spring 2012 Bridge Studio at Iowa State University visit the House of Dance and Feathers in the Lower Ninth Ward, run by Ronald Lewis (in background).

To do this, students must learn first to listen and then reflect upon what community members have said so that they can identify underlying assumptions and values behind words. Class discussions are an important part of this, giving students the opportunity to share impressions and collaboratively draw conclusions. Reflective writing is also important as it asks students to go back to their first impressions and reconsider them. After traveling to the Ninth Ward in New Orleans as part of the spring 2012 Bridge Studio (Figure 3), one Iowa State student wrote about how different the residents were from how they are portrayed in the media:

> The tradition and pride in the Lower 9th Ward is incredible… The houses may not be extravagant but they were earned through hard work… They were not on welfare, or accepted handouts, and the media portrays them as the 'poor folk' of the Lower 9th Ward.

For public interest design projects run through the Bridge Studio, students typically engage some background research prior to their initial community meeting so that they can test the assumptions they have made about both the social and physical contexts in which they will be working. Students develop questions for initial community meetings based on these assumptions and are often surprised to realize that the types of conclusions that typically serve as foundations for projects in non-outreach studios are frequently incorrect, based on their own experiences and not those of the people who live in the place. Identifying this personal bias is an important part of any design work and can most readily be addressed with students through real-life community interactions (Figure 4).

Figure 4. Students from the spring 2010 Bridge Studio meet with residents of Corning, Iowa to discuss housing needs in January, 2010.

Discussing their work using ordinary language also requires students to be precise in their intentions and not hide behind obscure terminology. They must say exactly what they mean and if they don't know what this is, they have to figure it out and articulate it. In addition, collaborating with communities helps students understand how their design work can embody the values of others and proactively shape the values inherent in the built environment. This is not only important for the specific project in which they are engaged but also has a broader epistemological value in that it demonstrates how the built environment inherently constructs value, creating a new frame through which to view the work of not only community designers but also corporate firms and starchitects. This helps students see directly how typical design constructs the built environment within the values of the dominant socio-economic system while public interest design can give voice to communities often overlooked by the dominant socio-economic forces.

Design as Integration of Knowledge

One of Boyer and Mitgang's proposals in their seven goals is to change the term "design" to "integration of knowledge" within professional architectural curricula. While "design" is associated with

aesthetic and theoretical constructs, the process that architects undertake in creating any kind of project includes but goes beyond these areas to integrate aesthetic, theoretical, technical, financial, social, and a wide range of other concerns.[28]

Any project in practice requires a juggling of clients, codes, budgets, schedules, climate, details, form, context, and so on. In school, students cover technical, historical, practice, and design subjects in a variety of courses and integrate them to various degrees, particularly in the studio. While architecture as a profession has constructed itself around formal expression and functional/technical problem-solving, this ability to synthesize a vast array of different types of knowledge is unique to design and makes architects uniquely suited to take leadership roles in addressing complex, multi-faceted issues that may or may not involve buildings.

While this synthesizing activity is present to some extent in architectural education already, public interest design provides a unique platform for developing this ability. These projects require students to juggle a larger array of demands than is typical of most design studios. Client needs and wants are critical parts of any outreach project and, like many practitioners, students struggle to balance these needs with their design ideas. Budget and schedule are also critical factors in these projects and again while students may initially see these as obstacles, they eventually come to understand them as guides for decision-making and determining value.

In the spring 2010 Bridge Studio at Iowa State, students worked with the rural community of Corning, Iowa to develop a prototype for an environmentally friendly single-family home. The main goal of the project was to reduce utility costs for residents, thus reducing their overall housing costs. Students quickly found that "cost" is a complex idea and, as Thomas Fisher describes it, "prices often exclude externalities, things of value that we cannot easily quantify and so do not get included in calculating costs and benefits. As a result, economic value does not always capture what we value as a community, society, or culture."[29]

Initially, the students in the Corning studio felt that the low project budget of $100,000 for a 1000 square foot house compromised their ability to design a truly sustainable project. They could not, for example, provide highly efficient geothermal heating for such a low upfront cost even though the system would pay itself off over time. They learned, however, that they could make choices that would stay within the budget and still reduce utility costs. Orienting the house to maximize solar exposure and focusing budget on the building envelope become the primary strategy for the energy efficient design. While these systems were initially overlooked in favor of more technical complexity, the students learned to think of the design as an integrated system that included not only technical requirements but also budgets and client desires.

Once they understood this, the students became advocates for the system, explaining the relationships between up-front construction costs and long-term lifecycle costs and benefits to community members and contractors. The relationship between providing houses that people could inexpensively purchase and providing houses that would help the same people stay in the community for many years had to be understood not only in terms of technical building systems and construction budgets but also in terms of the quality of life of the place. Articulating these relationships clearly and framing them within the overall goals of the project helped convince not only the community but also the contractors building the project to implement systems they would not normally use such as a heat recovery ventilator and sealed, insulated ductwork (Figure 4). The studio also partnered with the Iowa Center on Sustainable Communities to provide contractor training that successfully turned skeptics into enthusiasts about green building systems.

PUBLIC INTEREST DESIGN AS A FUTURE FOR ARCHITECTURAL PRACTICE

Contemporary issues like the declining economy, global warming, increasing urbanization, and the growing gap between rich and poor are manifest in and affect the physical environment. These issues go beyond the scope of individual client needs, however, and to address them requires a broader type of architectural practice that goes beyond building form to engage the values and systems that shape the built environment.

Figure 5. Students in the spring 2010 Bridge Studio at Iowa State University present options for the design, budget, and technical systems for a sustainable, affordable single-family house to residents of Corning, Iowa.

Public interest design has been part of the architectural spectrum since William Morris began questioning the values of industrial mass production. Today, there is renewed vigor in this discourse represented by non-profit organizations like Design Corps and Public Architecture; university-based design centers like the Gulf Coast Community Design Studio and the Detroit Collaborative Design Center; and community design centers including the Building Community Workshop in Dallas, Texas and the Community Design Collaborative

in Philadelphia, Pennsylvania as well as many, many more. Many university architecture studios, courses, and workshops also engage public interest design projects and partnerships, exposing students to architecture that goes beyond form-making and beyond buildings.

Just as the economy and professions like construction and project management seem to be reducing the availability of architectural work, public interest design offers a framework whereby architects can expand both the scope and impact of their practices by building on the integrative skills that are already inherent in architectural practice and education. Within the academy, however, most public interest design courses are typically offered as upper level options within architectural curricula. Their optional status assumes that they are not central to architectural study while their upper level status assumes that students must first acquire "basic skills" before they can handle the complexities of these kinds of projects. Notable exceptions to this pattern include the now-classic immersive Rural Studio at Auburn University as well as Boston Architectural College's more recently inaugurated Gateway Initiative, developed in response to the economic recession's reduction in conventional internships.[30] Understanding the range of abilities that public interest design can foster in our students and the preparedness it can create for future practice, whether traditional or progressive, should however be a central task for architectural programs of all types. As Boyer and Mitgang stated in 1996,

> The profession could be powerfully beneficial at a time when the lives of families and entire communities have grown increasingly fragmented, when cities are in an era of decline and decay rather than limitless growth, and when the value of beauty in daily life is often belittled… Schools of architecture, in other words, should educate students for both *competence* and *caring* – in service to the nation.[31]

ENDNOTES

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30 For a discussion of the Gateway Initiative and its impact on the BAC's practice-based curriculum, see Len Charney and Gabe Bergeron, "Engaged, Purposeful Learning through Community Design," *Bridging the Gap: Public-Interest Architectural Internships,* Georgia Bizios and Katie Wakeford, eds., (Raleigh, NC: Lulu Press, Inc., 2011), 96-107.
31 Boyer and Mitgang, 129.