

The Necessary Instability of Design-Build

(Paper delivered at the International Projects Office Conference, London Metropolitan University Department of Architecture and Spatial Design, 11.18.05)

The Design Workshop is a unique urban design-build program offered by the graduate program in Architecture at Parsons The New School for Design. Its mission is two-fold: to provide pro bono architectural and construction service to non-profit organizations in New York City and to provide graduate architecture students the unusual academic opportunity to realize their design work in built form. Each year the client varies, but the projects are consistently engaged in programs of social value and design work expressive of contemporary ideologies of built form.

As a way of providing a sense of this design build program both in terms of its logistical practice and its pedagogical intent, I want to share a few observations about academic “design and build” programs (or “Project Offices” as they are known in Europe) in general and then, specifically, describe the projects from *The Design Workshop* to illustrate what we aspire to in conducting the affairs of this program as we do. I also want to frame this critique with a number of thematic pairings: the University versus the Community, Pedagogical versus Social Service, Idealism versus Realism, Knowledge versus Praxis, Intellectual versus Material Craft...in short, Designing versus Building within the academic realm.

All of these notions are situated in one way or another within the ethical dimension of social life. Indeed, *The Design Workshop* at Parsons is committed to the belief that the *designed and built* environment acts as the ground of and for social practice. This idea is, and has always been, a foundational tenet of architecture. Furthermore, and without meaning to diminish its plenitude, the history of architecture can be thought of as simply a way of talking about the various forms this idea has taken in time and material space. However, the production of this complex social choreography performed by the interaction of brute materiality and human subjects in space has both intentional and inadvertent aspects. It is intentional to the extent that we design with a social purpose in mind but is inadvertent to the extent that built form more often than not produces unforeseen social configurations that humble architecture (and the architect) and remind us of the limits of modernism’s salutary social engineering by design. The philosopher of technology, Langdon Winner, has referred to these unanticipated consequences as having to do with the “politics of artifacts.”¹ He means this in the sense that the things and spaces we design always play a role in legislating the animation of their users. So, what then, is this relationship of the *designed* to the *built* that is so necessary but which seems so unstable?



¹ Winner, L. 1986. *The Whale and the Reactor*. “Do Artifacts have Politics?” Chicago: University of Chicago Press

Like other design-build programs, *The Design Workshop* attempts to provide students with a glimpse of post-academic architectural and building practice along with a more sophisticated sense of construction, materiality and craft. It also shares with others programs the desire to inculcate a sense of architectural citizenry. However, an equally important aspect of *The Design Workshop* has been to provide the academic opportunity to more closely scrutinize the transformation of the *thing-designed* to the *thing-built* and, in so doing, to perhaps provide a better understanding of the perception and practice of social life.

In the United States, at least, design-build programs have typically been characterized by an implicit moralism that while rooted in a sincere commitment to democratic social welfare has, nonetheless, spawned some troubling ideas about what architects do, should do, or can do. One idea is based on the notion that “if you don’t know how to build it, you can’t design it”. This idea has both a *material* and *social* aspect. Briefly, the material imperative derives from the empiricist tradition and maintains that any true understanding of the things we design comes from the thing-itself and not from our representations of it.



That is, one must experience the tangible material weight and workings, as it were, of things in order to then know them. The social imperative stems from trying to reverse the decline of the craftsman/builder from his exalted medieval perch to his fallen state in the late-capitalist blue-collar work force. Both aspects, again speaking for the United States, share a kind of moralizing (and “naturalizing”) gloss which suggests that getting your hands dirty is a sign of healthy pioneer grit and the virtuous laborer’s honest day’s work. In any event, however one chooses to describe this ethic, many design build programs were expressly founded as a means to address the dichotomous designer vs. builder wars that have waxed and waned in western architectural thought since the loss of the guild system. But, I think we all must be careful here. Decrying either the loss of the architect’s connection to the material (or “real”) world and/or their effete and politically suspect arrogance toward a perceived “underclass” of builders, these perspectives risk injecting students with a restrictive world-view that both diminishes the intellectual life as well as a deeper sense of social and political justice.

Another potentially misdirected idea has an even more explicit moral dimension. As my colleague Joanna Merwood has noted, this is the desire to direct an architecture student’s education “...to a communal rather than authoritarian practice. Proponents of Design Build programs within universities argue that architecture students should be encouraged to develop a social and political consciousness. One of their strongest arguments is that architects must take on a public role as advocates for their own communities, or for communities in need.”²

² Merwood, J. 2004. *Scapes No. 3*, “Design Build: Pedagogy and Social Action”. Publication of the Department of Architecture Interior Design and Lighting, Parsons the New School for Design, New York



I would only add that *any* student, of architecture or otherwise, should be encouraged to develop a social and political conscience. Insisting that the only way to achieve this in architectural education is by having architects participate in community building through practical effort is to risk letting our students off the hook in broader areas of citizenry. Furthermore, social “change” is just that. It is a dynamic process directed toward an unpredictable and unknowable future. Community based projects are certainly beneficial in solving local functional problems or addressing needs in the present, but they are also useful in reflecting social aspirations for a future community and experience, one that might be more rich in its expression, more interesting in its endeavors, and more just in its social practices. To speculate on what this community and experience might truly look like relies on a sharpened awareness of the contingency of both historical events and cultural configurations, not to mention what the historian Patrick Joyce has called the “capacious and greatly stimulating assemblage of ideas about such things as the nature of identity, the significance of representation, the production of knowledge, and the nature of social life.”³ In short, all the kinds of understandings we would wish - in an ideal world - our universities to impart to our students’ intellects *before* we start telling them about the virtues of strapping on their tool belts to construct that world.

This leads me to the crux of my concern about the rhetoric underlying many design build programs. While I believe that there are many forms and ways of gathering up knowledge, including strapping on tool belts and registering the world through the working of our bodies, I am wary of the tendency of design-build programs to form a kind of reactive anti-intellectual rear guard. Often self-servingly supported by the professional world, this resistance comes from a perceived disconnection of academic life from the “real world”. I will address this so-called “disconnection” further on, but for present purposes, my point in raising this and the other troubling ideas mentioned above is to suggest the possibility of framing the design-build program another way. While I want to reaffirm my appreciation for the real contributions of all such programs - and one must surely nod gratefully toward the late Sam Mockbee’s *Rural Studio* which for us, in the States, is the sine qua non - *The Design Workshop* at Parsons has thought of itself as addressing a somewhat different set of concerns.



1.

³ Joyce, P. 2001. *Times Literary Supplement*, “A Quiet Victory: The Growing Role of Postmodernism in History”. London

Since 1998, when *The Design Workshop* (*figure 1*) became a required studio in the graduate curriculum, the students in the program have completed eight projects, ranging from a renovation of their own University facilities, a convocation space in support of housing for the formerly homeless, and an inner city public school athletic field house. Throughout these projects, the students and faculty have pursued the notion that physical space is also conceptual space - that our physical interactions with the material world always condition its meaning for us.

As in other design build programs, our students share the satisfaction of contributing to the public realm. In addition, they study construction technique, material choice, detail, actual scale space-shape, and program intention; however, these are studied less as a corrective to academic education than as an added opportunity to probe the link between the intentions of an immaterial idea and the consequential role it plays in the tightly wound relationship between material and social practice.

The Process

Over the course of a 15-week spring semester, *The Design Workshop* involves a team of typically 12 students, under the guidance of one or two studio faculty members, which works directly with a sponsoring non-profit client or agency to develop a project from initial concept to final construction documents. Actual design work begins quickly with students first proposing individual schemes and then, as affinities and underlying connections between individual designs begin to appear, the schemes go through a process of merging into fewer and more developed solutions. The students, on occasion, refer to these moments of consolidation as “Death Matches” - a process of fighting to persuade one’s peers that your idea is the best one while learning to graciously stand down in the face of even better ones. The actual final design is established in the middle of the semester and is the synthesis of both the client’s and the student’s collective aspirations.

The second half of the semester is devoted to researching materials and details (*figures 2, 3*) and executing the necessary construction documents needed for fabrication.



2.



3.

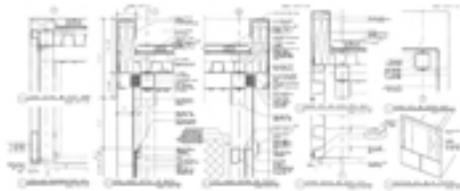
As the final design must fall within the client’s budget, the students work directly with suppliers and trades to verify cost, availability, and construction time-lines. Simultaneous to their work in the Design Studio, students also take a course in Construction Technology which provides a research platform for the material investigations of the design studio. The course consists of a series of lectures and seminar discussions on the technology of building systems. Advanced material research, analyses of available construction techniques and clear representation of architectural details are key components of this seminar.

Toward the end of the semester, students execute real-scale mock-ups (*figure 4*) of the final project designed in the studio in order to refine the construction details.



4.

Working between this seminar and the Design Studio, the faculty oversees the production of a comprehensive set of construction drawings that both meets the client's budget and organizes the scope of work for the summer construction (*figure 5*).



5.

After final approval by the client of the design, materials, construction costs, and scope of work, students undertake the actual construction during the summer months beginning in late May and concluding prior to their return to school in late August.

Under the close supervision of an instructor on the construction site, students organize in teams to oversee every aspect of the building process from ordering materials to coordinating any sub-contractors to constructing the final project. Each student puts in a minimum of 38 hours/week "in the field" but most regularly exceed this in their excitement to see their design realized in built-form. Since 1998, the summer construction has been overseen by faculty member, Terry Erickson (*figure 6*).



6.

A graduate of the Parsons Master of Architecture program, Terry has been indispensable in the translation of the design studio into its material realization. He has taken over 75 students into the field, many without any building experience, and brought all safely back to school each subsequent fall. In addition, his empathy for the students' intentions and his fine eye for the adaptive detail have always ensured the desired relationship between the designed and the built.

Early Projects

The Event Corridor, The Glass Corner, and The Swing Room

The first years of *The Design Workshop* were very difficult as we attempted to figure out our “process”. Despite the high aspirations, the new program lacked both funding and clients willing to entrust their architectural fate to 2nd year graduate students. Who could blame any prospective client in a culture that in the United States, especially, is quite suspicious of both architects and architecture? In response to this, a decision was made to have the architecture students undertake three projects to design and build their own department facilities. After all, what better way to help students understand the client perspective, the consequences of budgets and scopes of work while avoiding many of the associated risks. Indeed, as it turned out, these first *Design Workshop* projects proved to be important tests for the new program and although they represented small-scale undertakings they provided a large foundation for what would follow.

The Event Corridor was the first phase in the department renovation. Challenging the existing 12000 s.f. loft space and the acquired habits of the student and faculty that this spatial condition had produced, this renovation was undertaken to both improve daily academic life while reconstructing future possibilities for the school as a whole (*figure 7*).



7.

A laminated medium density fiber board (MDF) surface along the corridor wall “folds” to mark True North on the floor as one moves along its 175 ft. length. Cross cutting this corridor are folded metal flats that re-distribute the student lockers and register within the studio the transverse rhythm of the ancillary rooms along the corridor. The wall is further punctuated by five “constructed events” in glass, wood, and aluminum which playfully articulate and comment on specific aspects that support the life of the studio (computer lab, bathrooms, library/archive, fabrication shop, and lounge/review space) (*figures 8, 9*).



8.



9.

The Event Corridor established the material and detail vocabulary that would characterize the architecture department in the years that followed; however, the two subsequent phases, The

Glass Corner and The Swing Room, expanded on the students' interest in the discursive spatio-material relationships that characterized and directed their social practice as architecture students. The Glass Corner project (*figures 10-13*) reconfigured a generic sheetrock classroom into a hyper-articulated assemblage of individuated tectonic components (wall, ceiling, aperture, column, corner, floor) that collectively "extended" the room beyond its spatial boundaries while providing a new event space for public programs. The assembly hall's 14 ft. tall glass corner faces the entry to the department and welcomes each visitor as a lens on its academic practices.



10.



11.

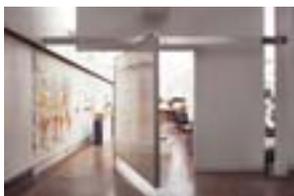


12.



13.

While in its metonymic aspect, The Glass Corner has become a key part of the department's formal and public identity, The Swing Room (*figures 14-16*) was conceived as "joint" space which serves to bring together both the public and private aspects of the department's academic life. Designed as a prototype for creating local pin-up enclosures along the column grid of the studio, the rotating/sliding polycarbonate panel draws the studio space into the room or provides enclosure for seminar space. At the other end of the room, a series of glazed vitrines extend into the public gallery to The Glass Corner showcasing student work and completing the spatial circuit begun in phase one.



14.



15.

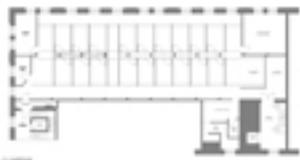


16.

Production/Presentation: A Choreography: The New York Studio Program

The decision to use the site of the architecture students' own spatial and social life proved to be an important one. It forced a reflexive critique of the departmental experience while providing a kind of research and development opportunity for *The Design Workshop* itself. The department renovation gave *The Design Workshop* something to show and in 2001 it received its first outside funding from a major construction corporation as well as its first non-profit client from outside the University. The client was The New York Studio Program. Sponsored by the Association of Independent Colleges of Art and Design, the NYSP provides students from around the United States an opportunity to work in the heart of New York's art community. Given the task of converting a raw 4000 s.f. loft space characteristic of lower Manhattan's Tribeca neighborhood, *The Design Workshop* was confronted with its first taste of the "hybrid" program. With the demand for both individuated studio working stalls for up to 20 artists conflicting with the need for a large open End-of-the Year Exhibition space, the architecture students drew on their

research from *The Swing Room* and developed a system of sliding, rotating, and stackable fiber board walls. During the semester, these walls are arranged to structure 12 x 12 studios along the length of the loft (*figures 17-19*).



17.



18.



19.

An open perimeter provides access. Large pivoting cabinets of ash and homasote supported along the loft's central column spine provide the end walls and storage for each studio space (*figures 20-21*). For the End-of-the Year Exhibition, the flexibility of the system offers a range of presentation possibilities to address the type and diversity of artwork produced during the year as the stalls are re-configured in a choreographed performance of lateral slides, twirls, and "retreats".



20.



21.

Thresholds and Extensions of Identity

By the time *The Design Workshop* entered its fifth year, the issue of interiority had become thematic. This was driven in large part by the reality of making architecture in a dense urban fabric where the work of most architects involves the renovation of interior conditions. One of the lessons of *The Glass Corner* had been the close study of the conventional elements that constitute the interior (wall, door, window, ceiling, etc.) and the request to construct two small academic proto-type lobbies for Parsons School of Design provided another opportunity to investigate the conjunction of their functional and narrative possibilities in a project termed *Thresholds and Extensions of Identity*.

Situated adjacent to the elevators which serve the design school's main building, the lobbies (*figure 22*) establish both the threshold for and formal identity of the unique academic

departments while also referencing their place in the collective identity of an urban school of design.



22.

Rather than avoiding the dense network of existing conditions (HVAC ducts, sprinklers, waste lines, and electrical) typical of urban interior renovations (*figure 23*), the students saw them as opportunities for their own intervention.



23.

The small space draws on the formal vocabulary of the existing infrastructure but re-assembles and re-materializes it to provide departmental display, shelving, seating, and information (*figures 24-25*).



24.



25.

Materials are cast polyurethane, lit acrylic and polycarbonate, tinted thin-set concrete, and hand-brushed metal steel & aluminum. A large suspended light “duct” overhead guides the visitor through the textured space into either the rear studios or the department offices where it punctures the exterior wall of the building drawing in daylight to the interior and projecting the department’s own light (and presence) into the city at night (*figures 26-27*).



26.



27.

Take the Field

As well as addressing specific programs, clients and problems, the earlier projects of *The Design Workshop* established the limits of what was possible at the interface of the academic and public realms. Through these projects, the program learned what was realistic to expect from students constrained by their limited experience as designers (not to mention builders - *figure 28*), an inflexible academic calendar poorly adapted to the contingencies of construction, and the complex regulatory environment which controls the urban life of New York City.



28.

Indeed, as *The Design Workshop* matured, it began to reach out more confidently to an under-served public realm in offering its design-build services to non-profit advocacy groups. In 2003, the students worked with Take the Field, a public-private partnership dedicated to re-building the athletic facilities of New York City's inner city public schools. The program called for a prototype field house located at The Grand Street Campus High School in Brooklyn, NY and resulted in *The Design Workshop's* first freestanding building.



29.

Situated at the final turn of the running track and the end zone of the high school football field (*figure 29*), the 600 s.f. field house takes its cue from the scale, form, and texture of the industrial neighborhood seen beyond the field while also serving as a ceremonial gateway from the high school behind (*figures 30-36*).



30.



31.



32.



33.



34.



35.



36.

An array of steel components (weathering Cor-Ten, structural tubes and connectors, galvanized corrugated decking, porcelain and perforated screens) were assembled to produce varying patterns of transparency and opacity and to differentiate the porcelain steel half-time huddle “chalk board” privately facing the home-team school building, the operable storage door-wall facing the field, and the concession stand east of the portal (*figures 37-39*).



37.



38.



39.

Common Ground Community

Since its inception, *The Design Workshop* has had a strong effect on the rest of the architecture program at Parsons. Its studio design work, material research, collaborative spirit, and engagement with the public life of the city has influenced both the curricular and social culture of the department as a whole. It has helped direct its urban focus and sharpened attention to what is at stake for architecture in the future of the City.

In 2004 *The Design Workshop* undertook a project in collaboration with the Common Ground Community, a non-profit organization dedicated to providing supportive housing for the formerly homeless. Charged with creating a new 2400 s.f. public entry and exhibition gallery within a larger restoration of its historic building, the former Prince George Hotel, the program called for providing coat-check, bar, catering station and bathrooms in support of the landmark Grand Ballroom used by Common Ground for its public programs (*figures 40-42*).



40.

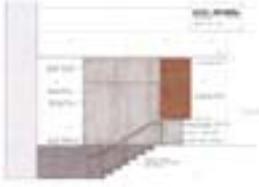


41.



42.

The design of the space was largely informed by Common Ground’s own philosophy of social and material sustainability: rather than hiding the homeless or ignoring the city’s derelict properties, the organization aims to treat both with dignity and respect. The students, in turn, chose to celebrate the complex history of the Prince George by stripping away the layers of material neglect and revealing the original brick and terracotta tile beneath. Within this exposed condition, but always standing slightly apart, a new architectural vocabulary frames the viewers’ experience. The poured concrete, glass and steel entry wall (*figures 43-44*) provides apertures into the raw space where an expressed structural steel assembly supports a cantilevered translucent acrylic mezzanine floor allowing close inspection of the old terracotta detailing.



43.



44.

Beneath the mezzanine, reflective lightweight aluminum panels swing in various configurations to provide exhibition display while a backlit floating stepped ceiling exaggerates the perspectival promenade to the Grand Ballroom entrance (*figures 45-48*).



45.



46.



47.



48.

Interchange: Nassau

In the evolution of *The Design Workshop*, there is a detectable DNA. Spatial and scalar issues, material and detail choices, program interpretations and narratives, etc. tend to re-appear to inform the new projects and critique the old ones. It is the kind of discursive/recursive looping that one would expect from a research enterprise, which *The Design Workshop* has surely become. But in this genealogy, there is also the self-reflexive relationship of the students themselves to their work in *The Design Workshop*, which comes with trying to understand the meaning of their own social practices as developing architects.

At the end of the 2005 summer, *The Design Workshop* completed *Interchange: Nassau*, a project in support of the Lower Manhattan Cultural Council's Artist in Residency "Swing Space" program, dedicated to revitalizing Lower Manhattan, post 9/11. *The Design Workshop* project was intended to help the LMCC foster exchanges between artists, businesses, and residents in the downtown area (*figure 49*).



49.

The project, situated in the large lobby of a vacant office building on Nassau Street, is organized into three components: conduit, docking walls, and event units, (*figures 50-52*) all of which were fabricated on-site using customized hardware, various treated metals, bent plastic, and stained wood.



50.



51.



52.

The conduit forms an armature overhead the central space providing lighting from a series of removable and reconfigurable fluorescent fixtures, and electricity built into the modular sections of the piping. The docking walls, (*figures 53-55*) located at the end of the conduit system, define a visual boundary that both announces and veils the activities inside the Event Space.



53.



54.



55.

The event units (*figures 56-57*) are also nested at regular intervals between the docking walls when not in use. However, during public events, these units, characterized as entry, media, seating/conference, and bar, can be rolled into different zones throughout the space where they unfold and provide flexibility in meeting the various requirements of art openings, screenings, performances, and lectures.



56.



57.

Besides addressing their client's program, budget, and legal issues, these students, like many of their predecessors, spent their year dealing with the city and state agencies which govern municipal development, the New York City Landmark's Preservation Commission, and the Department of Buildings which enforce city codes and zoning. They also wrestled with the building site's management agency and union representatives who maintain their own form of oversight. These unavoidable bureaucratic obstacles are typically encountered in a complex urban context like New York City and bring me to some cautionary comments about the "real world" and some concluding thoughts about *The Design Workshop's* place within it.

In 1947, during a visit to New York, Le Corbusier wrote: "Design has killed architecture. Design is what they teach in the schools...the school kills; the school kills by being shut off far from crafts and materials. Reality is lacking. ...I know quite well that later on, when the students are

thrust into *real life*, they are forced to acquire a different diploma: that of *reality*...”⁴ Le Corbusier, of course, was reacting against the conservative practices of the Ecole des Beaux-Arts, and while I think his reaction was legitimate, it does provoke the question: where exactly had the students been if not already in “real life?” (*figure 58*).



58.

This notion of a “real world” (and its hapless other, “the academy”) has been the shibboleth in the long-standing architectural education wars and has conjured a number of the now familiar dichotomies that have come to characterize the combatants: theory vs. practice, knowledge vs. experience, ideality vs. physicality, designing vs. making. Yet, this cleaving of the “real” and whatever its alternative might be - the false, the inauthentic, the illusionary, the unreal – risks devaluing the importance of reflective thought and learning, while raising up the specter of a retributive professional life. It calls into question the very validity of intellectual endeavor in our field, and injects a moralizing ethic into any quest for the understanding of it.

Teaching architecture has always been problematic because there is the assumption that the essential goal of this education is professional competence in the material design and construction of a building and yet, most students spend three or more years not even attempting this once. Unlike other professional disciplines, such as medicine or law, where the professional education provides direct hands-on testing of one’s facility to practice, architecture necessarily maintains an unstable relationship between its pedagogy and its practice. And it is for this reason that I suggest to students that we do *not* teach them to “do” architecture but rather teach them to *think* about doing architecture. Later, when they become professionals they will learn how to do it in, perhaps, the true sense. In my judgment, this is what good schools have always done. Good schools are typically not “conservative” in the sense that they take seriously the fundamental goal of gathering up knowledge in order to facilitate social change. They are, by nature, contentious, experimental, and critically reflective about the world as given. Most significantly, they are future-oriented quite simply because, for students, the future is the only possible real world.

In a redemptive turn for me, Le Corbusier later distinguishes the academy as social abstraction from teaching as social practice. He says: “Learning? That is the joy of every day, the ray of sunlight in life...I would not be hostile to the School if the commentary went thus: Here is what was done; here are the reasons for it. In the present circumstance, such things can no longer be effective... And so, investigate the contingencies, establish their nature clearly and set your feet

⁴ Le Corbusier, *When the Cathedrals Were White* (1947 reprint; New York: McGraw Hill, 1964), 115-117. My italics.

on that mobile springboard in order to leap forward. In that way you will do things which are true, useful, and of unquestionable value.”⁵

I think this oddly impractical and abstract sounding call to the students is Corb at his best. It reminds us to resist fixing the material world in time or as the only authentic one. It also reminds us that the transition from the *designed* to the *built*, at the end of the day, is not about the transition from the academy to the professional world, or from theory to practice, or from the immaterial to material. Rather it is simply a transition from one form of an idea to another. So when I see the achievements of design build “Project Offices” in all of their robust materiality and craft, I do not see them as symbols of the real world at all. I see them, most significantly, as ideas - ideas about people, place, time, and architecture’s capacity to direct light on such things in new, interesting, and, hopefully, valuable ways (*figures 59-60*).



59.



60.

⁵ Ibid, 116-119.