

Educating for an Embodied Culture of Building

In our current era of interdisciplinary professional practices, *responsibly* relinquishing control opens the possibility of new agency and new perspectives through deep and sustained collaboration. To relinquish control responsibly requires that we build sturdy bridges of shared, slightly overlapping, knowledge with our collaborators. These overlaps facilitate effective communication and create the conditions for *chemical* reactions between two disparate knowledge bases.

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The lack of such bridges results in superficial multi-disciplinary collaborations, in which each party takes full responsibility for their portion of the project while disassociating themselves from the domains of their collaborators. Their work stands in close proximity, but remains territorial. The lines of their independent domains are rarely productively blurred nor do they foster common goals.

In architecture, collaboration is inherent. These collaborations, however, have predominantly taken a multi-disciplinary form, and this has frequently led to the kind of litigious, entrenched, and combative attitudes that have driven a wedge between contemporary architects and builders. These detrimental attitudes first take flight in education, where certain patterns and habits are instilled. In this essay, we make the seemingly counter-intuitive argument that in order to responsibly relinquish control in a truly interdisciplinary era, architects must reengage with the whole culture of building as a means to build powerful bridges of mutually respectful collaboration with those who would materialize our designs.

Designbuild¹ experiences in architectural education, as one variant of experiential learning, hold promise in promoting development of explicit and tacit knowledge about design, construction, and the relationship between the two. The intent of designbuild practices in academia is not necessarily to train, vocationally, future designbuilders but rather to transform the environment in which architects form their professional character and habitus and thereby contribute to the repositioning of architects in the culture of building.

Architecture has been accused of being a “strong art but a weak profession”.² Today’s pessimism regarding architecture, particularly in the sense of a *weak profession*, grows, in part, from a belief that the architectural profession has become increasingly distant from its master builder roots. While education is not entirely to blame, it seems clear that a different kind of architectural education will produce a different kind of architectural profession.³

We argue that an experiential learning dimension, akin to clinical curricula in medical and law schools, ought to be integral to the education of an architect and required in all accredited-professional architecture degree programs. We make this assertion with the knowledge that

some leaders in architecture schools view designbuild education as “anti-intellectual” or “vocational”.⁴ Despite the tremendous growth of designbuild education, it remains marginal and vulnerable.

THE ARCHITECT’S DECISION

Although it may be said that architecture has never been a strong profession, as the term is understood today, it has a long legacy as a proud and influential *discipline*. This distinction, between *profession* and *discipline*, lies in the complex nature of practice in contemporary society, which calls on architects to provide the creative vision for its culturally meaningful buildings. The *discipline* of design, artfully executed, creates buildings with symbolic and utilitarian value that likely wouldn’t be had without the architect’s unique skill set. The *profession* of architecture rests on the governmentally regulated responsibility to make buildings that protect the public health, safety and welfare. As with other regulated professions, society, theoretically, bestows monopoly power to render particular services – in the case of architects, the design of certain kinds of buildings. For the past half-century or more, architects have struggled to articulate the true value of architecture. Consider the following sentiments:

In some parts of the world architects are already fearful that industrialization in building will affect them adversely; that the builder and the manufacturer will take over the design of these stereotype buildings. Here in America there is a growing concern in relation to the “package building” in which design is merely a minor part of the complete building construction services.⁵

The profession advertises its confusion, too, when some of its members treat seriously the view that architecture is primarily an art form which has little to do with satisfying user requirements...The only effective course open to architects if they want their profession to endure is to resume authority in the area which is their unique province, as makers of buildings who are also makers of form.⁶

The idea that architecture belongs in one place and technology in another is comparatively new in history, and its effect on architecture, which should be the most complete of the arts of mankind, has been crippling.⁷

Now consider this: despite their contemporary ring, these quotations date from 1954, 1977, and 1984, respectively. Echoing these earlier sentiments, much has been written over the past twenty years concerning the decline of the architectural profession. Accelerated by the *Great Recession*, a heightened level of soul-searching in the profession and in academia now aims to increase the profession’s social capital. On February 8, 2015, this professional anxiety led the American Institute of Architects to air an unprecedented 30-second television commercial as part of a national campaign “designed to change public perceptions of architects and architecture”.⁸

Since the medieval period, when architects – as we now conceive of them, as persons who design and draw buildings before they get built – emerged from the builders’ guilds, the architect’s relationship to actual building has waxed and waned. It has been shown that, at times, decisions about design and decisions about construction have been made concurrently.⁹ Other times, these decisions have been made sequentially, as in the latter half of the twentieth century, with architects making decisions about design intent and contractors making decisions about construction means and methods.

At the risk of oversimplification, architects are increasingly faced with the decision to move toward one of two poles: 1) embrace their roles as space planners and superficial aestheticians – as in the creators of visual delight – or, 2) reinsert themselves in the leadership vacuum that has developed in the culture of building. Recent developments in integrated project delivery, building information modeling (BIM), and digital modeling and fabrication,

some have argued, will hearken a new era of closer collaboration between design and construction.¹⁰ The pendulum swings.

THE RETRACTING ARCHITECTURE PROFESSION

Today, architecture represents a small slice of the whole culture of building. While architecture is artificially constrained by treating it as synonymous with building design, design of the built environment is rightfully the primary endeavor of the architecture profession. Far from excluding or diminishing the work of architects operating at the limits – areas that may lie beyond or outside of building design – clarity in this purpose enriches these activities that serve as a necessary foil. Expanding beyond familiar approaches to design, the architecture profession must also engage fabrication and construction within its specialized body of knowledge. Rarely do architects share their experiences and knowledge beyond the simplified and abbreviated forms that grace the pages of its professional journals, these being as much about advertising as anything else.¹¹

The demise of professions in the late twentieth century, including architecture, has been well-documented.¹² Some argue that architects once had political influence, only to lose it in recent decades.¹³ The public understands architects to be the central figureheads of the building professions, but in reality architects often lack a commanding influence on the built environment. In the most pessimistic view, only the authority gained through the increasingly vulnerable shield of professional licensure preserves the role and power of the architect.¹⁴

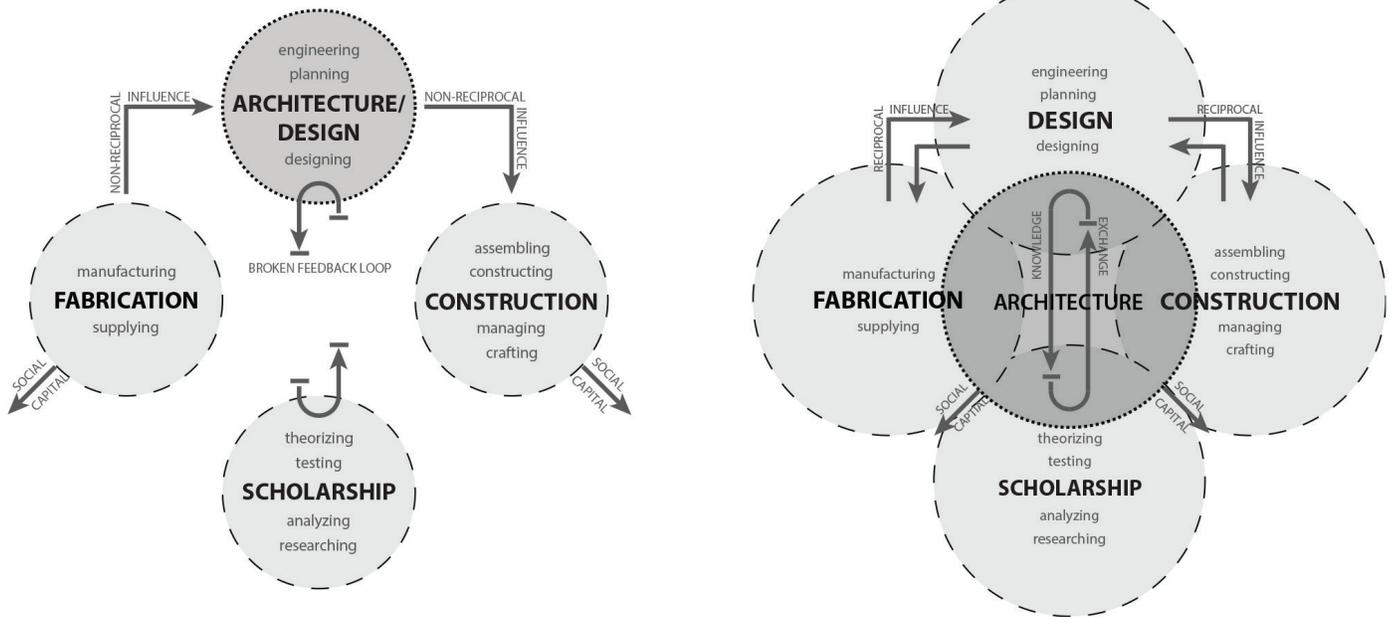
While nearly all professions risk diminished market share in the face of emerging alternative career paths or through advances in computer software and the ubiquity of online information, architects appear uniquely fragile. BIM, for example, gives allied professionals the capacity to produce orthographic construction drawings, the once-exclusive domain of the architect/draftsman who was specially trained in the art of drawing.¹⁵ Now, a person with sufficient construction knowledge – i.e. an experienced builder – can model a building and its assemblies in BIM, and produce the requisite drawings for construction. Perhaps more troubling than loss of market share is that, while the building industry is expanding its knowledge base, architects appear to be retracting theirs, thereby undermining potential interdisciplinary bridges.

THE ARCHITECT'S HABITUS

What are the implicit, often ignored, priorities, assumptions, and values cultivated in academia and that subsequently shape the discipline? Valorization of design as a superficially “aesthetic” enterprise – obsessed with the creation of pleasurable retinal images – rather than design as a holistic aesthetic enterprise in the spirit of John Dewey’s *aesthetic experience* in which multiple performance and experiential criteria are valued, has placed architects in a precarious position. The *aesthetic experience* is “inherently connected with the experience of making”.¹⁶

Adopting the sociological framework of Pierre Bourdieu, Garry Stevens points to the creation of a *habitus* and the inevitable enculturation of educational systems. He suggests that, rather than deny what is inevitable, the architecture profession ought to better understand the socialization process and the resultant habitus.

The habitus is a set of internalized dispositions that incline people to act and react in certain ways and is the end-product of what most people would call socialization or enculturation...It is an active, unconscious set of unformulated dispositions to act and to perceive, and much of its power to structure our lives without us realizing it derives from the thoughtlessness of habit and habituation that the habitus produces. The habitus provides us with a practical mastery of social situations, telling us “instinctively” what to



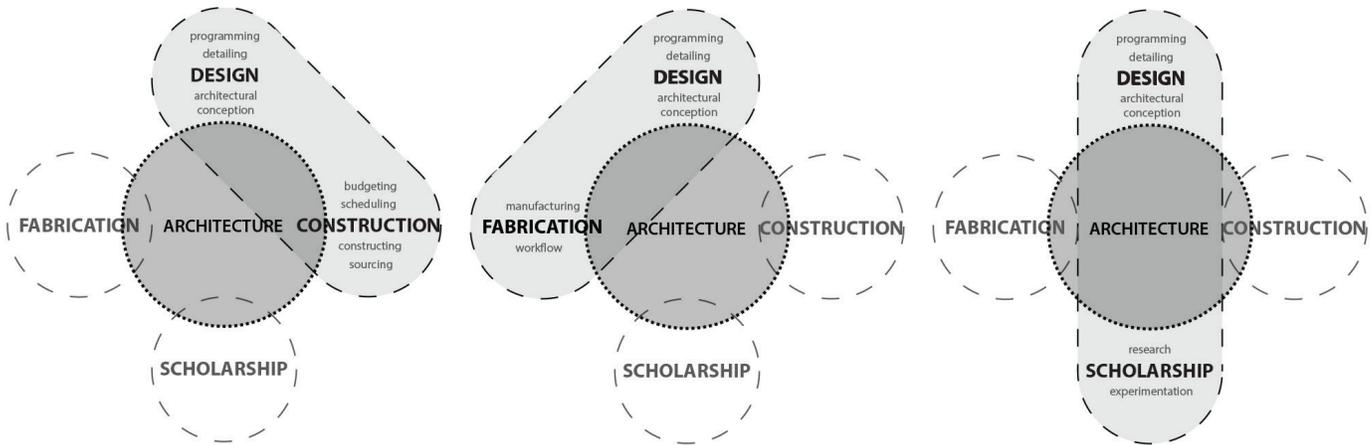
do. It provides the feel of the game. When our habitus is correctly adjusted to the social game we are playing, we feel comfortable, natural, at ease; we know how to react; we feel at home.¹⁷

Stevens argues that the typical architectural habitus finds comfort in art galleries networking with potential clients, but is ill at ease on construction sites engaging with tradespeople. Robert Gutman observes that a “striking physical discontinuity exists between the office setting in which the architect’s work is performed and the building site where the design work is executed...Some members of the office staff must constantly move between the two worlds, in which they also have to deal with different types of people: their more aesthetic colleagues who conceive the plan for the building, and the brawny types who translate those plans into construction”.¹⁸ Similarly, Juhani Pallasmaa writes, “During the post-war decades, the intellectual emphasis in architectural education, and the growing practical as well as mental distance between the architect’s studio and the construction site have, however, decisively weakened the craft essence of the architect’s work”.¹⁹

The image of the bourgeois architect has led to an exaggerated artistic dimension in the architect’s habitus, and this has come at the expense of a balanced, hybrid attitude, where decisions about design and construction happen in a more integrated way. Anecdotes abound of architectural education reinforcing a mythical perception of the architect, whether from the singular genius cultivated in the design studio to modern masters treated like iconoclastic artists that continually eschew tectonic considerations. The architect, however, ought to be a hybrid of many things, e.g. architect-designer, architect-builder, architect-entrepreneur, architect-poet, and architect-activist. For the health of the architecture profession, a habitus that embraces and aligns with the hybrid nature of the discipline is desperately needed. An embodied culture of building re-inserts the architect at the center – overlapping, informing, and informed by the allied professions.

Design thinking is neither entirely pragmatic nor entirely idealistic. Design thinking, at its best, is holistic, in that it treats disparate parts of a particular situation with equal consideration, expanding the brackets. Bracketing, as it is used here, refers to the practice of selectively defining design problems according to the value system of the designer

Figure 1: *The Culture of Building.* Diagrams depicting the current and idealized relationships between architecture and its allied discipline.



Bracketing is inevitable and frequently reveals, upon close examination, the designer’s unstated values and assumptions. Unlike the engineer’s *calculative thinking*, design thinking does not bracket out the aspirational, the aesthetic, or the significant. Unlike the artist’s *meditative thinking*, design thinking does not bracket out the utilitarian, the practical, or the concrete.²⁰ Consequently, architects operating in design thinking mode tend to be generalists, ideal bridging agents in interdisciplinary collaboration.

In academia the design studio has traditionally served as the place to exercise design thinking. Due to the limitations of hypothetical projects on paper, much is necessarily bracketed out in order to concentrate on chosen issues. It is customary to bracket out considerations of project budgeting, value-based decision-making, craftsmanship, and material/assembly innovation. Quite frequently detailing, construction, and fabrication are treated as secondary to the insatiable appetite for conceptualizing form.

Bracketing is necessary given the purpose of the academic design studio, the temporal constraints of the semester or academic year, and the emerging knowledge and skillsets possessed by architecture students. While bracketing is unavoidable, what we choose to bracket and when we choose to shift the brackets has serious implications for future practice.

DESIGNBUILD HABITUS

A complimentary model of teaching architecture has emerged in recent decades – the designbuild studio. Although the Yale Building Project was initiated in the 1960s, it was not until the 1990s that several other universities in the United States began to adopt this model. Today, designbuild activities, in some form, can be found in the majority of architecture schools in the United States.²¹

Unlike the typical design studio, designbuild studios tend to bracket out issues of complexity, scope, and scale in favor of detail design, fabrication/construction, funding/budgets, materials, client/consultant coordination, and a myriad of other interrelated considerations that otherwise fail to contribute to the education of the architect. One of the hallmarks of the designbuild approach is that it is obligated to “deal” with the types of issues commonly bracketed out of typical design studios. Although the particular bracketing of the

Figure 2: *Bracketing Relationships*. Diagrams depicting three generalized bracketing modes illustrating synthesis between domains under the umbrella of architecture.



design-build studio often limits the complexity of the project, it encourages the exercise of holistic design thinking in ways that few other experiences do, in turn promoting a hybrid habitus.

Designbuild studios tend to instill in architecture students an additional dimension of their habitus. If, indeed, these types of experiences help to expand the habitus of future architects so that a certain comfort and familiarity with contractors and tradespeople becomes more likely, then one can only assume that this is even more critical for women architects, who may be doubly alienated by a habitus informed by their architectural education as well as society's too-slowly evolving preconceptions. A potent designbuild experience may have the capacity to overcome some of the obstacles facing the next generation of women in architecture, particularly in regard to comfort, familiarity, influence, and perceived authority beyond the design office.

Far from being a substitute for design studio, designbuild studio serves as a much-needed companion experience, drawing from and synthesizing earlier design studio experiences and/or enriching later design studio experiences with a tacit understanding of the material and tectonic logic integral to the culture of building.

The virtues of designbuild education mirror the clinical work common to medical and law professions. In medicine, for example, an education includes classroom or laboratory experience, clinical experience, and a residency experience that is intended to expand and synthesize existing knowledge and complete the education of the physician. Similarly, an architectural education ought to include classroom and design studio experience (*theoria*), designbuild experience (*phronesis*), and internship experiences (*praxis*), with the intention to expand and synthesize existing knowledge and complete the education of the architect.

Designbuild experiences tend to cultivate empathy with craftspeople, fabricators, and general contractors, valuable if for no other reason than architects cannot go it alone. These experiences expand the material and tectonic imagination of students, asking them to look beyond form-making to discover design opportunities. Architecture students are provided with the opportunity to exercise their multiple intelligences through making, deepening their understanding about how one's system of values are shaped.

Figure 3: *[Re]Engaged Symposium*. The extemporaneous audience hall designed and built by Studio 804 for the *[Re]Engaged Symposium*, just moments before the start of the event.

ENDNOTES

1. By using designbuild we are consciously differentiating the educational experience from the design-build project delivery system used in professional practice. We prefer designbuild because it connotes an integration of the two activities within a single individual's holistic experience.
2. Robert Gutman, "Emerging Problems of Practice," *Journal of Architectural Education* 45.4 (1992): 198.
3. Mirko Noordegraaf, "Remaking Professionals? How Associations and Professional Education Connect Professionalism and Organizations," *Current Sociology* 59.4 (2011).
4. Anecdotally supported by a confidential conversation with an educator whose designbuild program had recently been dissolved by new leadership
5. Ralph Walker as cited in Turpin Bannister (ed.), *The Architect at Mid-Century: Evolution and Achievement*, Volume 1 of the Report of the Commission for the Survey of Higher Education and Registration of the American Institute of Architects (New York: Reinhold, 1954), xiii.
6. Robert Gutman, "Architecture: The Entrepreneurial Profession," *Progressive Architecture* 58.5 (1977): 41.
7. Reyner Banham, *Architecture of the Well-tempered Environment* (Chicago: University of Chicago Press, 1984), 9.
8. "Architects Launch First-Ever Integrated Public Awareness Campaign," American Institute of Architects, 3 February 2015, <http://www.aia.org/press/releases/AIAB105520>.
9. Andrew Saint, *Architect and Engineer: A Study in Sibling Rivalry* (New Haven: Yale University Press, 2010). Howard Davis, *The Culture of Building* (New York: Oxford University Press, 2006).
10. Coren Sharples, "Unified Frontiers: Reaching Out with BIM," *Architectural Design* 79.2 (2009).
11. Thomas Fisher, *In the Scheme of Things* (Minneapolis: University of Minnesota Press, 2000).
12. Herbert M. Kritzer, "Professions Are Dead, Long Live the Professions: Legal Practice in a Postprofessional World," *Law & Soc'y Rev.* 33 (1999). John McKinlay and Lisa Marceau, "The End of the Golden Age of Doctoring," *International Journal of Health Services* 32.2 (2002). Alexander Styhre and Pernilla Gluch, "Creativity and Its Discontents: Professional Ideology and Creativity in Architect Work," *Creativity and Innovation Management* 18.3 (2009). Mirko Noordegraaf, "From 'Pure' to 'Hybrid' Professionalism: Present-Day Professionalism in Ambiguous Public Domains," *Administration & Society* 39.6 (2007).

The consequence of designbuild education is an expanded habitus. Like the practiced movements of a dancer, the physical act is embodied. Similarly, the repetition of hand drawing embeds knowledge in the hand of the architect. The same can be said for the repetition of fabrication and construction. Yet, architects are not builders. They are not, in the conventional sense, craftspeople. The architect, however, can be likened to the conductor, whose embodied knowledge of music and its instruments commands the stage, guides and collaborates with the performers, and orchestrates the complex whole. It would be difficult to imagine a conductor who lacks an embodied knowledge of the instruments and constructions of music.²² The designbuild studio exercises the material, tectonic, and poetic imagination that ought to empower future architects with a deeper toolbox from which to draw upon in making design decisions.

DESIGNBUILD EDUCATION LEAVES ITS MARKS

In March 2015, in honor of the twentieth anniversary of Studio 804, the University of Kansas hosted the *[Re]Engaged Architecture Symposium*. The event featured a cast of influential architects – Frank Harmon, Ted Flato, Brigitte Shim, Brian Mackay-Lyons, Andrew Freear, Marlon Blackwell, and Dan Rockhill – all interested in craft and the role of the tectonic imagination in architecture. The event also included an evening of Pecha Kucha presentations from Studio 804 alumni. The theme of the PK event was showcasing the outstanding and diverse achievements of Studio 804 graduates and demonstrating how the designbuild experience had left its mark on their careers.

Like many other designbuild programs, Studio 804 is not solely about the designbuild experience. The values that Rockhill strives to instill in his students reorients them to what is possible in architecture. At first glance the breadth of career trajectories undertaken by this particular group of Studio 804 alumni is surprising; from historic preservation and adaptive reuse to cutting-edge digital fabrication; from residential designbuild to university master planning, from health and wellness and public interest design to emerging high-tech methods of integration between architects, engineers, and contractors. Yet, the capacity of a potent designbuild experience to launch these disparate careers seems, in hindsight, completely natural and inevitable.

The presenters drew threads of their designbuild experience through their career trajectories to the present. Some traced a direct route from Studio 804 to designbuild firms. Their academic designbuild experience is evident in the confidence in which they approach their careers. Yet, designbuild education should not be limited to educating future designbuilders, as is evidenced by those whose career paths led them to historic preservation and adaptive reuse. Whether it is the aptitude to work closely and collaboratively with tradespeople or the acquisition of knowledge needed to become a sustainability specialist, these were initially cultivated on a Studio 804 construction site.

Still others used their designbuild experience as a springboard to engage in cutting-edge digital fabrication or to work on the construction side of the conventional and unwholesome schism between design and making, coordinating virtual design assist processes. The Studio 804 experience has provided young architects the drive and the capacity to take on all sorts of wicked problems and to transcend conventional boundaries and domains. In each instance, these alumni were able to clearly demonstrate how Studio 804 had left its marks.

AN EMERGING DESIGNBUILD HABITUS

This way of being an architect is not new but often forgotten or marginalized in contemporary practice. Architects such as Carlo Scarpa and Sigurd Lewerentz were well known to have possessed an empathetic relationship to craftspeople. These individuals represent periodic excursions from the disengagement of architects with making. Their expanded habitus



enabled them to be at home on the construction site. However, this sort of architect stands out precisely because this way of practicing has become foreign to most architecture offices. Recent shifts in academia and the profession foreshadow a changing tide.

Contemporary examples of architects proactively expanding their habitus into other spheres of action would include Kieran Timberlake who, in addition to their normative architectural practice, develop innovative software to inform design decisions at an early enough point in the design process for it to make a difference.²³ They also proactively engage in advanced building performance research and have built a transdisciplinary research group of people with backgrounds in ecology, chemistry, physics, economics, and anthropology to more rigorously expand their knowledge base and efficacy in practice.²⁴ And in yet another professional innovation, their practice actively participates in prefabrication and, importantly, in the dissemination of their experience.²⁵

ShoP Architects are exemplars in this regard, expanding their sphere of action and efficacy into the realms of design software development, real estate development, construction management, and advanced prefabrication. SHO P principle Greg Pasquarelli states, “In a 21st-century world, the really complex building types mean that we have to achieve more than just looking good...You’ve got to start thinking about manufacturing and materials and processes in new ways. Therefore, a lot of what we invest our time in is thinking beyond plan, section and elevation”.²⁶

They have invented a model of practice to ensure that their design expertise will expand beyond mere styling into the DNA of the building at the economic, tectonic, aesthetic, and constructional levels. The embodied practices of Keiran Timberlake and SHO P, are some of the strongest arguments for the types of pedagogical transformations we are advocating for.

CONCLUSION

Architecture stands before the proverbial forked path. While the bulk of the architecture profession appears content to continue along the narrow, crisply paved path it has charted for some time now, a growing minority is opting for the broader, unpaved and overgrown, but strangely familiar path – “a thrilling time when a putative avant-garde has so outstripped (or

13. Francis Duffy and Andrew Rabeneck, “Professionalism and Architects in the 21st Century,” *Building Research & Information* 41.1 (2013). James M. Mayo, “The Manifestation of Politics in Architectural Practice,” *Journal of Architectural Education* 50.2 (1996).
14. Julia Evetts, “The Sociological Analysis of Professionalism: Occupational Change in the Modern World,” *International Sociology* 18.2 (2003).
15. Paolo Tombesi, “On the Cultural Separation of Design Labor,” In *Building (in) the Future: Recasting Labor in Architecture*, eds. Peggy Deamer and Phillip Bernstein (New York: Princeton Architectural Press, 2010). John Dewy, *Art as Experience* (New York: Perigee, 2005), 50.
17. Garry Stevens, “Struggle in the Studio: A Bourdivin Look at Architectural Pedagogy,” *Journal of Architectural Education* 49.2 (1995): 112.
18. Robert Gutman, “Professions and their Discontents: the Psychodynamics of Architectural Practice,” In *Architecture From the Outside In: Selected Essays by Robert Gutman*, eds. Dana Cuff and John Wriedt (New York: Princeton Architectural Press, 2010), 51.
19. Juhani Pallasmaa, *The Thinking Hand: Existential and Embodied Wisdom in Architecture* (Chichester, U.K.: Wiley, 2010).
20. Martin Heidegger. *Discourse on Thinking: A Translation of Gelassenheit* (New York: Harper and Row, 1966). Heidegger made a distinction between two fundamental modes of thinking – calculative and meditative thinking.
21. W. Geoff Gjertson, “House Divided: Challenges to Design/build From Within,” 2011 ACSA Fall Conference. <http://www.acsa-arch.org/docs/emails/house-divided.pdf>
22. Fisher, *In the Scheme of Things*.

Figure 4: *Architecture students “at home” on the construction site.*

Students of the University of Kansas’ Dirt Works Studio ramming an earth wall as the sun sets.

23. Paula Melton, "KieranTimberlake Develops New Revit Plug-In to Calculate Building Life-Cycle Impact," *Architectural Record*, 5 November 2013, <http://archrecord.construction.com/news/2013/11/131105-new-revit-plug-in-helps-calculate-building-life-cycle-impact.asp>.
24. Stephen Kieran, "Research in Design," *Journal of Architectural Education* 61.1 (2007).
25. Stephen Kieran and James Timberlake, *Refabricating Architecture: How Manufacturing Methodologies Are Poised to Transform Building Construction* (New York: McGraw-Hill Professional, 2004).
26. Michael Bleby, "SHoP Architects on a Mission to Reclaim Role of 'Master Builder'," *BRW*, 30 May 2013, http://www.brw.com.au/p/professions/shop_architects_on_mission_to_reclaim_ec6RA8Ve28CPGg2hjnAnM
27. Philip Nobel, "Introduction" in *SHoP: Out of Practice*, by Kimberly Holden, Gregg Pasquarelli, Christopher Sharples, Coren Sharples, and William Sharples (New York: Monacelli, 2012), 36-37.

abandoned) the grand army it ostensibly serves that a countervailing, revisionist force can take a principled stand at the forgotten center of its field".²⁷ What might we discover if we peer down two hypothetical paths illustrating polar conclusions?

Path A: Architecture will embrace the increasingly specialized global society by retracting further into the realm of *superficial aesthetic design*, where design becomes increasingly synonymous with *style*. The insatiable appetite for making buildings look good will continue to crave novel form-making and visual delight like a junk food, eschewing "less interesting", "healthy" concerns. Clients with relatively shallower pockets will have to do without, causing *design* to be value-engineered out of all but the most elite projects. Architects themselves will be increasingly siloed from builders and fabricators. Architecture will serve fewer and fewer people with more and more dazzling feats of stylistic creativity, surface-applied to structures largely conceived and planned by others. In seeking spectacle and novelty, there will be little desire to develop and share the "boring" knowledge gained from complex problems. During hard times, Architecture will go dormant, until the next boom cycle comes around. Allied fields will expand further to fill the void, and the projects they complete will never realize their full design potential. While this characterization is sensationalized, it requires no great stretch of the imagination to get from where we are now to there.

Path B: Architecture will more fully embrace *holistic aesthetic design*, integrating and empowering this critical dimension with the substance gained through engaging the whole culture of building. Architecture will more fully connote a fertile activity with equal parts design, art, science, craft, and technology, a socio-cultural enterprise linked to thinking holistically and contextually. Architects will develop an expanded view of agency, by responsibly relinquishing control in fertile, intertwining, interdisciplinary collaborations, in realms conventionally not thought of as "architectural". Construction, management, economics, and real estate will become increasingly legitimate professional concerns in the expanded habitus. Architecture will at once seem radically new and refreshingly familiar.

Which of these two poles will most accurately characterize the next generation of architects will largely hinge on the efficacy of evolving approaches to professional architectural education. Experiential learning of all sorts helps to exercise those intelligences, and designbuild education, as an especially potent experiential learning approach, helps exercise the intelligences having to do with collaboration, logistics, materials, tectonics, financial planning, and execution. Only time will tell what continued effect these pedagogies will have on the profession, however, at the end of the day, a healthy, valued, and indispensable architecture profession will surely benefit from a balanced, engaged, and more robust kind of architectural education.