
Introduction

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In 1995, I watched a subcontractor plastering the rooms of a house my partner and I had designed. It was clear that he knew every corner of the house in a way we never would. Whose contribution mattered more, his material labor of construction or our immaterial labor of thinking, drawing and model-making? I also felt it clear that if the owners ever gave up the house, they would not be able to sell it to just anyone; they'd be forced to donate it to my partner and me, the only ones who loved it as they did. (Yes, they have since sold it, and no, we weren't its recipients.) Which of us—designer, builder, owner—could rightly say this house was “theirs,” I wondered? What value—emotional, monetary, social—could be placed on our particular role as designers?

Writing about detail in an article for *Praxis* a few years later,¹ when computer-aided manufacturing and prefabrication became hot, the relationship between design, production and ownership was again weighing on me. Who determines the design of the prefabricated house, the fabricators or the architect? And without a patron, could the architecture of prefabrication be commission-free? In factory-based production, design not only could not be distinguished from construction, but the definition of “detail” expanded from the joining of materials in an object to the joining of steps in the production process. Theoretically, I felt it was important to rescue the appreciation of detail from the hands of the phenomenologists who too easily, it seemed to me, equated good design with the sentimental craft attached to the handiwork of beautiful drawings, the traditional product of architectural work.² Not only did their conservative position reject digital production and paperless outputs (which just weren't going to go away), but it also kept design in the realm of the elite, since the crafty, one-off buildings they so admired could never find an underprivileged, urban audience. Surely architectural work could move through these procedural changes and still keep alive the flame of detail, craft, and quality design.

My article for *Praxis* in turn led to two “a-ha” moments. One was reading, in Edward Ford’s *Details of Modern Architecture*, this quote:

Insofar as twentieth-century architects have concerned themselves with the social consequences of their work, they have focused on the way in which buildings affect the behavior of their occupants. Insofar as 19th century architects concerned themselves with the social consequence of their work, they focused on the way in which buildings (and particularly their ornaments) affect those who build them. There is perhaps no greater difference between the architects of the 19th century and those of the 20th than that each group was so indifferent to the social concerns of the other.³

Why did we architects give up on the worker? And didn’t the present emphasis on the intricacies of environmental façades and material performativity invite a reconsideration of the fabricators’ essential role in design? In addition to this, the outsourcing of drafting, rendering, and model-making to distant countries implied that even the craft of representation was not an intimate, office-based activity. Shouldn’t the larger family of building-makers—fabricators, factory workers, engineers, HVAC consultants, energy specialists, drafters—be consulted about their creative, social, and monetary satisfaction?

The other such moment occurred during research initiated by the *Praxis* article that led to the symposium (2006) and eventual book entitled *Building in the Future: Recasting Architectural Labor* (Princeton, NJ: Princeton Architectural Press, 2010) that Phil Bernstein and I organized and edited. A grant from Yale University allowed me to interview engineers, metal and glass fabricators, steel and aluminum factory workers, architects, and software developers to determine their role in the current chain—or was it now a network?—of design command. Besides confirmation of the thought that building work was no longer linearly handed down from architectural auteur, to staff, to contractor, to subcontractor, the interviews indicated the importance of new software supporting building information modeling (BIM) and new contracts allowing Integrated Project Delivery (IPD), frameworks with the potential to change the old design/construction hierarchies for good.

Beyond these explorations into the material and social nature of architectural design, seminars I taught at Yale School of Architecture—“Architecture and Capitalism” and “Architecture and Utopia”—continued the exploration of architectural work and, as a not-too-subtle aside, responded to architectural theory’s pathetic avoidance of issues raised by 9/11 or the 2008 financial crisis. “Architecture and Capitalism” examined an alternate historiography of architecture that looked beyond the standard focus on formal, stylistic progression,

and attempted to link those changes to transformations in capitalism. Issues of labor are not always paramount in this history, but labor is certainly an important ingredient. The book that this seminar research yielded, *Architecture and Capitalism: 1845 to the Present*,⁴ can be seen as the precursor to this more contemporary book. Likewise, "Architecture and Utopia" (a more optimistic alternative to "Architecture and Capitalism") examined societies with varying attitudes about work: societies like Robert Owen's New Lanark made the work day short so pleasure and leisure could follow. Other societies such as William Morris's in *News from Nowhere* and Charles Fourier's *Phalanstere* promoted work as inherently creative and pleasurable. Marx's utopian society freed the worker from the alienation imposed by capitalism—alienation from one's fellow workers via job competition, from one's products by the division of labor, and from oneself by the false needs of consumption. These latter utopias not only offered a glimmering view of work that many of us entering architecture thought we would experience (designing is fun!), but indicated how work was integral to society in general: how one felt about one's work and how it was assigned value formed the basis of social relationships.

While none of these utopian societies addressed architectural work per se, it became impossible to feel good about the architecture profession. It had become commonplace to see architecture graduates with \$100,000 in debt begging for internships that paid little more than minimum wage, honored to be working 15 hour days, seven days a week as a sign of their being needed; principals of firms working almost exclusively for the rich, trying to prove that their meager fees weren't paying for hubristic self-serving experiments; young architects hoping to move beyond bathroom renovations to possible suburban additions.

Things came to a head on two separate occasions during the last three years. One was an architectural symposium where a young audience member asked the panel what to expect from a career in architecture, to which one prominent, intelligent speaker fervently answered, "Architecture isn't a career, it is a calling!" What? How had we fallen into the same ideology that Christianity used to make the poor feel blessed for their poverty? How could architecture have become so completely deaf to the labor discourse that it could so unself-consciously subscribe to the honor of labor exploitation?

A few months later I was part of a "Who Builds Your Architecture?" panel at the Vera List Center for Art and Politics at the New School in New York. Organized by Kadambari Baxi and Mabel Wilson in collaboration with Human Rights Watch monitoring the labor abuse of indentured workers building projects in the Emirates, South Asia, and China, they hoped to initiate pressure on architects

designing these buildings to in turn put pressure on their clients to monitor construction protocols. Not a single architect working in these geographic areas would concede to participate in talks, sign a petition, or consider interfering in labor issues. This response was in contrast to the many artists who refused to have their work shown at the Guggenheim Museum in Abu Dhabi, possibly the most infamous of these questionable projects. How could artists, with less professional security, more easily identify with indentured workers than did architects? How ironic that if architects thought they were outside the work/labor discourse because what they did was art or design instead of “work” per se, that artists themselves didn’t abdicate the social responsibility that accompanies the self-identification as a laborer.

In retrospect, I shouldn’t have been surprised. Critical theory has embraced the field seemingly most distant from architecture’s economic engines—art—to prove the extensive realm of capitalist ideology. Art history and theory has examined the tense, historical relationship between art and politics. Having taught courses in Architectural Critical Theory, I was very aware of the fact that teaching architects about these issues meant reading the essays of art theorists and hoping students could grasp the implications for architecture.

A few examples in architecture theory have proved the exception, most notably the work circling around the writings of Manfredo Tafuri, the Marxist architecture historian who argued that there could be no socially beneficial architecture as long as there was no socialism. This intricately considered argument leaves little hope for architecture to be more than capitalism’s pawn, but it is singular in its reading of architecture as operating in a dialectical fashion with art as both struggle to adjust to the traps of industrial capitalism. The legacy of his writing resides in one of two types of response, both of which we learn from: architectural thinkers who defend their relevance within capitalism, either by leaving overt Marxism behind or by rereading architecture’s opportunities; or non-architecture, neo-Marxist theorists who occasionally extend their thinking to architecture.

One portion of the architectural response has capitalized on Tafuri’s belief in architecture’s inability to be socially relevant in capitalist society—that it is savvy to limit aspirations to (mere) formal exploration. This has allowed many architects, Peter Eisenman primary among them, to be pure formalists while claiming to be Tafurian/Marxist readers. Another neo-formalist group has analyzed the proposition that the autonomy of architecture—its uniquely formal language—allows it to mirror the ethical void of capitalism. The nuanced work of this latter group, exemplified most clearly by K. Michael Hays, has been largely historical and focused on the effects and consumption of architecture. Another

group of thinkers, less interested in the formal or autonomous side of Tafuri than his critical stance regarding capitalism, are defenders of criticality against those “post-critical theorists” who want to fully indulge the advantages offered by capitalism’s new modes of production.⁵ While sharing post-criticality’s rejection of Tafuri’s gloom and doom fatalism, the anti-post-criticality group—Keller Easterling, Reinhold Martin, and Felicity Scott among them—redirect (if not reject) Tafurianism for a global, slippery, non-monolithic capitalism whose contradictions and mistakes offer opportunities for infiltration. And finally, Ken Frampton’s work centering on critical regionalism moves the discourse away from Marxism proper toward Hannah Arendt’s humanist, phenomenological social analysis. Frampton’s *Labour, Work, and Architecture* (New York: Phaidon Press, 2002), an influential collection of polemical essays arguing for an “arrière-garde” resistant to technical optimization, is less an examination of labor and work per se than the types of spaces “good work” yields, but it still extends a critical look at how we architects have come to work.⁶

These exceptions aid architecture’s social and cultural consciousness and bring the terms of labor to an architect’s table. Tafuri’s declaration that architecture would resist relevance until the user/public controls the means of production set in motion my own interest in digital fabrication, the source of much of this book’s inquiry. Frampton’s reference to Arendt’s distinction between work and labor—one that I here resist because it’s an unhelpful division when both are ignored by architects (but which is astutely explored by other authors, especially Paolo Tombesi)—directs our attention to the ethos of making, as does Richard Sennett in his *The Craftsman*.⁷ Easterling, Martin, and Scott remind us that capitalism’s historical particularity constructs the boundaries of production opportunities. K. Michael Hays reminds us that architecture resides not merely in the base but in the superstructure; or, more accurately, in his Althusserian outlook, dispenses with this distinction altogether. However, all of these exceptions spin around an empty center that still requires more focused attention, a center that examines architecture’s peculiar status of material embodiment produced by its immaterial work, work that is at once very personal and yet entirely social.

The chapters assembled here are meant to fill that void. While it might be missing both the Robin Evans of digital production (“Architects don’t make drawings, they make drawings of buildings”) and the Andrew Ross of architecture labor,⁸ and while it might also lack research on the specifics of contemporary architectural time-based work (typing in commands; talking on the phone; searching the internet; sketching on yellow trace; staring at a screen; attending meetings, etcetera), the totality of the texts herein cover the

essentials embedded in the question of contemporary architectural labor. There are articles by non-architects that demonstrate the arena of issues in which architectural theory could and should operate. There are articles by architects who don't see their writing in terms of critical theory but whose grasp of the facts puts the urgency of the architectural labor condition before us. If this set of chapters is still circling around a more data-driven examination of architectural work, it hopefully invites that next set of investigations which will entail a professional study of considerable scale.

The book you are holding is divided into five parts, moving generally from the most aesthetically broad to the most architecturally specific, but negotiating as well the different territories that architectural design labor marches through—creativity, autonomy, value and compensation, the connection to or division of design (mental labor) from construction (material labor), labor's construction of subjectivity and its resultant public realm—there are many subjects that architectural labor touches on and the authors here find their individual point of entry.

Part I, "The commodification of design labor," includes articles by thinkers largely outside the field who look at how immaterial labor gets categorized, spatialized, and monetized. The first chapter by Franco "Bifo" Berardi—one of the original Italian theorists associated with automatism and its embrace of immaterial labor (and hence an honor to have in this collection)—titled "Dynamic of the general intellect" looks at the artist as a subcategory of "the Intellectual," itself part of the triumvirate, Intellectual, Warrior, Merchant that dominates modernism's self-characterization. In this framework, Berardi suggests that the intellectual's subordinate position to the other two is a result of its own internal ambiguity that misreads the artist's particular and proper role. Metahaven's "White night before a manifesto" is a meditation by this graphic design firm on the role of the enlightened creative professional *vis-à-vis* the corporate global clients who benefit from their skills. The claim that what is valued in this exchange is a "surface" of virtual assets independent of the corporate objects themselves leads Daniel van der Velden and Vinka Kruk to create a manifesto protesting this form of exchange. Richard Biernacki's "The capitalist origin of the concept of creative work" looks at the manner in which writers' work was commodified when this new "creative class" fell into the protocols of Taylorization. While "architectural" only in the sense that Taylorization implied specific work spaces, this chapter nevertheless is an essential story of the period when creative work was placed—in this case clumsily—into a system of capitalist value.⁹ Andreas Rumpfhuber's "The architect as entrepreneurial self: Hans Hollein's TV performance 'Mobile Office' (1969)" is the sole chapter in this part addressing architecture proper, but it connects to the larger theme

of aesthetic commodification in its analysis of a video by Hans Hollein that is as much performance art as it is architecture. Hollein's performance/critique of uncentered, apparatus- and client-driven work anticipates contemporary aspects of the architect's "daily grind," mirroring an organization that has made us all entrepreneurs. The "Mobile" Office presciently portrays and begs contemporary self-reflection on our entrepreneurial selves. This chapter then neatly forms a bridge to the next section dealing with architectural work.

Part II, "The concept of architectural labor," includes chapters that speculate on the nature of architectural work *vis-à-vis* other forms of labor, identifying both the specific and shared characteristics of architectural work. My chapter, "Work," addresses architects' blindness to the fact that they perform labor and examines two of the underlying suppositions contributing to this ignorance: that creative work, like architectural design, isn't labor; and that work in general is laborious and uncreative. Looking at various examples of how work is conceived in utopian literature, I speculate that architecture can and should now conceive of its work in a positive, utopian manner. Paolo Tombesi's "More for less—Architectural labor and design productivity" argues that architectural practice as it is now constructed—caught in the web of fiduciary professionals, technical analysts, transnational building systems, local normative frameworks, and idiosyncratic architectural ambitions—makes it almost impossible to design a building "well." Tombesi also predicts both the demise of the canonical architectural worker and the necessity to dis-aggregate geographic practices and technical conventions. Pier Vittorio Aureli's "Form and labor: Towards a history of abstraction in architecture" examines the role that abstraction plays in both the Marxist exposition of industrial labor in general and in architectural labor—design—in particular. By connecting aesthetic abstraction to industrial production, the article links architecture theory's infatuation with autonomy to its primary role in creating spaces of production.

Part III, "Design(ers)/Build(ers)" includes two chapters that address the fundamental cause of the conceptual ambiguity surrounding architectural work: the separation of architectural design and mental labor from construction and material labor even though architectural design "manages" that construction. "Writing work: Changing practices of architectural specification" by Katie Lloyd Thomas and Tilo Amhoff gives an historical account of the changing nature of architectural work in the UK from the eighteenth century to the present as indicated by specifications—that written work that instructs the builder on how, not just what, to build. The historical changes, from procedures based on personal relations, speech, and trust to ones based on professional relations, writing, and legal obligations, indicate a shift in spec writing from determining the building as an

object to prescribing it as a process of work. These changes are today matched by a shift from process-based to performance-determined specifications written by specialists outside the design team; a change that, the authors argue, increasingly jeopardizes the architects' identification with the builders enacting their designs. Mabel Wilson, Jordan Carver, and Kadambari Baxi's "Working globally: The Human Networks of Transnational Architectural Projects" examines the expanded human labor networks—clients, technical consultants, contractors, labor contractors—that form around transnational building projects in the Middle East and Asia. It argues that the abuse of migrant laborers on construction sites is allowed by a system where fault is pervasive—and hence difficult to allocate—across a network of actors, at the same time that it insists that architects can no longer not account for the role they play within it. This chapter, in describing the camps that migrant laborers are forced to live in (a logical development of their disempowered status), links this one to the next, spatially focused, section.

Part IV, "The construction of the commons," includes chapters that analyze the subtle and not-so-subtle ways in which capitalism, in organizing work in a particular way, produces both impoverished subjects and spaces. Norman Klein's "Labor, architecture, and the new feudalism: Urban space as experience" examines how the new economy—disempowering unions and dismissing a labor theory of value—enacts a "feudalism" only mildly different from its original construct but different in its effects, now scripted spaces of entertainment and media. This chapter calls for a grammar for changing a social network definition of labor within the built environment. Alicia Carrió's "The hunger games: Architects in danger" looks at the development of professionalization as a new form of labor intended to offer—but radically failing to deliver—personalized and responsible attention to the public realm. Linked as the architectural profession is to speculation, it precludes addressing the basic needs of shelter and public assembly, as Carrió's case study of the Casa Invisible in Spain shows, by way of exception. Manuel Schwartzberg's "Foucault's 'environmental' power: Architecture and neoliberal subjectivization" examines Foucault's notion of governmentality—in which neoliberal society must "govern for the market, rather than because of the market"—to probe Foucault's underdeveloped idea of the "environment" which, Foucault indicates, is an essential construct of neoliberalism. Pointing out that Foucault did not intend this term metaphorically, he identifies architects as essential products and makers of this construct. The discipline of architecture must be rewired, Schwartzberg insists, to produce subjects resistant to neoliberalism's framework.

Part V, "The profession," includes chapters that look specifically at the potential for the profession of architecture to fully capture the value of

architectural knowledge and creativity. Phil Bernstein's "Three strategies for new value propositions of design practice" examines the damage done to a profession when it characterizes itself as a "lowest cost commodity" in the construction supply chain. Given that architects are "extensively educated, carefully screened, and certified through licensure," why, Bernstein asks, is the value proposition of architecture so poorly converted? Tom Fisher's "Labor and talent in architecture" compares architectural talent to talent in other fields—that of football players, film and music stars—in which talent translates into high salaries, and speculates on why this does not happened for those with architectural talent. Pointing out that the global economy increasingly needs architects as the demand for innovative environments becomes more pressing, Fisher looks at how the design fields can move away from the position of oppressed labor towards that of high-demand talent. Finally, Neil Leach's "The (ac)credit(ation) card" connects the concerns laid out by Bernstein and Fisher to the architectural academy. The institutional blocks that prevent true creativity and innovation in schools of architecture in the US and Europe are outlined, and new models for accreditation encouraging multi-disciplinarity and "porous relations between industry" are put forward.

While this organization of texts is logical, it also misses affinities and disagreements that transcend the authors' specific subject matter. A clearly Marxist orientation runs through many of the texts (how could it not, given the origin of the "immaterial labor" discussion in Italian automatism, or given Tafuri's critique of a profession that doesn't own its means of production?) while others emphasize architecture's need to simply play capitalism better; others avoid an ideological position to describe the internal illogic of our current concept of architectural work. Some texts assume architecture's essential creative nature (that may be its escape from commodification or commodification's particular partner), while others assume architecture's essential social obligation. Some blame and want to transform the profession, others blame a system that vastly transcends the profession. But as a totality, they form an outline of the issues implicated in architectural work.

Notes

1. Peggy Deamer, "Detail: The Subject of the Object," *Praxis: Detail* 1.1 (2000): 108–15
2. Marco Frascari, Alberto Perez-Gomez, David Leatherbarrow, Peter Carl, and Juhani Pallasmaa, for example.
3. Edward R. Ford, *The Details of Modern Architecture, vol 1* (Cambridge, MA: MIT Press, 1990), 9.

4. Peggy Deamer, ed. *Architecture and Capitalism: 1845 to the Present* (New York: Routledge, 2013).
5. These include, amongst others, Silvia Lavin, Bob Somol, Michael Speaks, and Sarah Whiting.
6. Fredric Jameson, Hal Foster, and Richard Sennett are the non-architectural cultural theorists who have left the most substantial impression on architecture. Fredric Jameson, in *Postmodernism, or the Cultural Logic of Late Capitalism* (Durham, NC: Duke University Press, 1990), and in "Architecture and the Critique of Ideology," in *Architecture, Criticism, and Ideology* (Princeton, NJ: Princeton Architectural Press, 1996), addresses the possibility that architecture can thwart ideological complicity by pushing its utopian aspirations. Holding a Marxist position that avoids the fatalism of Tafuri, Jameson expresses an architectural optimism lodged in postmodernism's fluidity of signification. Hal Foster—in his Dia publications such as *Vision and Visuality* (New York: The New Press, 1998) and his *October* articles like "What is Neo about the Neo-Avant-Garde?" and more recently in his *The Art-Architecture Complex* (London: Verso, 2013)—has consistently addressed art in Frankfurt School-inspired terms broad enough to encapsulate architecture, keeping alive the possibility of socially motivated, critical architectural production even as he outlines the complex tentacles of capitalist cooption and socially motivated theory. Richard Sennett has consistently addressed the particularities of craft and work in architecture, especially in *The Craftsman* (New Haven, CT: Yale University Press, 2009). Linking subjective work satisfaction to larger economic issues, his argument for the value of craft is exemplary if nostalgic.
7. Richard Sennett, *The Craftsman* (New Haven: Yale University Press, 2008).
8. Robin Evans (1944–93) analyzed architectural drawings for both evidence of social constructions of space and indication of the world-view of their authors. See Robin Evans, *Translations from Drawing to Building and Other Essays* (London: AA Publications, 1997), and Robin Evans, *The Projective Cast: Architecture and Its Three Geometries* (Cambridge, MA: The MIT Press, 2000). Andrew Ross has analyzed, critiqued and historicized the labor practices producing contemporary fashion. See *No Sweat: Fashion, Free Trade, and the Rights of Garment Workers* (London: Verso, 1997), and *Low Pay, High Profile: The Global Push for Fair Labor* (New York: The New Press, 2004).
9. Biernacki's *The Fabrication of Labor: Germany and Britain, 1640–1914* (Berkeley, CA: University of California Press, 1995) presents the model with regard to weavers of that period of the analysis and research needed for architecture. His research on the quantification of the movement of weavers' hands, the timing of their work, and the relation of these acts to their monetization, and later to the construction of the notion of authorship, is both concrete and theoretically expansive. See also: Richard Biernacki, "Contradictory Schemas of Action: Manufacturing Intellectual Property," lecture, Havens Center at the University of Wisconsin-Madison, Spring 2004, 82:04 minutes (23.48 MB), Mono 44kHz 40Kbps (CBR), http://www.havenscenter.org/audio/richard_biernacki_contradictory_schemas_action_manufacturing_intellectual_property