

Possibilities for Architectural Production under Capitalism

by

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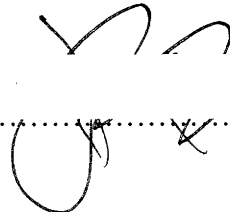
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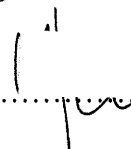
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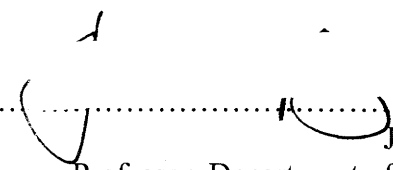
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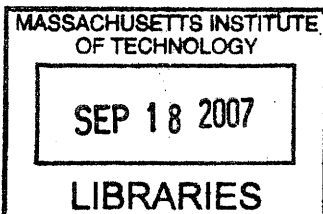


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Abstract

This dissertation explores the question: What effects do architecture and the economic realm have upon one another? I begin with an analysis of a specific trajectory in twentieth-century work on architectural theory and capitalism by Manfredo Tafuri and Fredric Jameson. I then review the historical use, and the contemporary meanings, of the term “vernacular” in architectural discourse. This is done to rehabilitate the term, which has become so laden with historical meaning as to impair its usefulness. My work to properly decouple the architectural historical specificity from the term, to reanimate it, enables me to develop a general framework for thinking about the relationship between innovative production and general production (both historical and contemporary).

My development of this framework in the contemporary context positions innovative architectural production as a cultural/aesthetic act that does not have to be bracketed out of the realm of capital, commoditization, or the market. It does not insist aesthetic production take a position against its co-option. Rather I indicate where I and other theorists have seen that position to be historically problematic (particularly for the avant-gardes). Co-option, defined here as the popular reproduction of unique acts, is treated nonpejoratively as the structural link between the political economy and innovative cultural, aesthetic, or political production.

I then apply this general framework to the question of maximizing power as an architect within capitalist relations. Here I discuss psychological and sociological models for the creative individual's behavior in professional relationships. In my analysis I prioritize those tactics and strategies that may enable an architect to have a sustainable career of prolonged creative influence.

I then outline major criteria in the development of the latest technologies for architects. These criteria are principles for the development of digital tools that would enable sustained creative design within the capitalist political economy, where building activity is structured as a project-

based environment of distributed, collaborative expertise, and by mandatory compliance with social norms expressed as the legal rights of others through building ordinances, codes, and a consensus of self-interested professionals, clients, landowners, builders, and municipalities.

Lastly the preceding parts of this dissertation are used as grounds for my consideration, in the conclusion, of possible political effects from architectural production under capitalism. Here I make the determination that, through architecture alone, there are none.

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Introduction

Whereas my next book might be about everything that is wrong with capitalism, this dissertation addresses only what is possible in architecture under capitalism. It is not about revealing things that are problematic or flawed under capitalism, nor is it about what means architecture may have to overcome, make right, reform, or do an end run around capitalism to arrive at something better. I will in fact conclude that political effects upon capitalism are not possible through architecture alone.

Broadly, I am not writing about the question of political effects, but about every sort of possibility I have been able to conceive for aesthetic innovation in architecture contained in—or bounded by—the massive structure of capitalism. I focus on how far within those various possibilities one can go in the direction of aesthetic innovation and change. Why? I believe that if one is ever to address what may be truly problematic or flawed under capitalism, one is obliged first to fully understand and describe how much is possible under it. From my vantage as an architect, therefore, it appeared necessary to try to fill the entire space, to color in whatever is possible for innovative architectural production under capitalism. I hope that I have at least named and categorized the possibilities (if not systematically treated them all) as I think them through aesthetically, technologically, and psychologically in the several chapters here, and finally as I briefly think them through politically in my conclusion. Politically, I find that architecture under capitalism remains contained with capitalism. It does not substantially reform it, change it, break away from it, nor usefully model any spaces or utopias “beyond” it (whatever beyond may mean) without the more important presence of larger socioeconomic forces (people, political will, sponsors) already in place and propping it up. This view is derived from the many arguments I’ve considered throughout the chapters.

In Chapter 1, I review a specific trajectory of twentieth-century theoretical writing on the theme of architecture and its relation to capitalism. Manfredo Tafuri’s work from the 1960s to the 1980s is considered first because he is the singular, critical architectural historian to develop this theme with a focus on architectural production in its relation to the economy, and to the rest of society generally. Fredric Jameson’s work of the 1980s is then reviewed because he has carefully

considered Tafuri's work. He draws strict lines between Tafuri's conceptualization of aesthetic production, which he characterizes as "modern," and his own, characterized as "postmodern," and addresses their relation to the economy and culture generally. This was at a time when Jameson was developing his idea that "postmodern aesthetics," in all the arts, are our cultural dominant under postmodern capitalism (which he, like many, had periodized as the present phase of capitalism). Moreover, I consider Jameson because architectural historians themselves invited him to the architectural critical theory debate in the early 1980s. The architectural historians in the reading group Revisions specifically requested him to write a consideration of both architectural production and Tafuri's theoretical work in connection with Jameson's emerging ideas on postmodernism. Jameson did that, yet architectural critical theory has not substantially contested or reviewed his theoretical findings on architecture's possibilities. Therefore I am undertaking such a detailed review here.

Such a detailed analysis of Tafuri and Jameson is necessary lest the standard coupling of these two theorists continue some standard misconceptions about the possibilities for architecture under capitalism. Jameson had the luxury of reading Tafuri, then writing; from this chronology flows the notion that Jameson took the baton from a Tafuri whose thought was exhausted, and finished some kind of theory race under the new global order of political economy that he has a better grasp of than Tafuri had. As my analysis shows, in reality Tafuri and Jameson ran equally far in their thinking about cultural production, particularly about architecture, within our contemporary capitalist system. A large part of the problem lies in the style and language alone of Jameson's writing, and the fact that Jameson followed Tafuri and the latter made no response. This leaves us with only the impression Jameson wants us to have. It is the place of my detailed analysis, and the rationale for its structure, not to accept this. Generally speaking, the impression Jameson wants us to have is that Tafuri's resolutely negative thought is truncated in time (Jameson calls it modernist), so that Tafuri's approach is conveniently put to rest by time itself. As Jameson constructs a massive literary-critical image of postmodernism as our cultural dominant, he assumes in many places that Tafuri simply doesn't see this. A related misconception is that Tafuri doesn't identify postmodernism effectively. Jameson is saying in effect that we don't need to think Tafuri's way anymore, and the main thrust of a standard reading of Jameson after Tafuri is to appreciate the sense of relief that a theoretical construct

more positive than Tafuri's arrives with Jameson's enclave theory and positive ideology of cognitive mapping. Jameson is concerned to maintain architecture's utopian vocation, yet he has not in fact done this; as my detailed analysis shows, Jameson is as unenthusiastic about any architectural "hopes in design" as is Tafuri. I conclude Chapter 1 by considering what Tafuri and Jameson accomplished, and what they left undone, regarding the theme of architecture and its relation to the economic realm.

In Chapter 2 I focus on the conceptual social divisions within the space of architecture, specifically by comparing the views of those social divisions devised by Pierre Bourdieu, Tafuri, Garry Stevens, and myself. As I discuss a threefold division in architecture (innovative production, average production, and vernacular production), it becomes necessary for me to offer a detailed description of the third position—vernacular production in architecture—as the important common denominator against which architects in the other two define themselves. Now I choose to use the term vernacular precisely to correct a problem in its usage in architectural discourse, namely that it is a term too laden with historical meaning. I am certainly aware that in architectural discourse the term has predominantly been used to describe indigenous building styles using local materials and traditional methods of construction and ornament, especially as distinguishable from academic or historical architectural styles. In fact I developed the entire text of Appendix A to address its historical use and link the term with the need I see to be able to continue to use it today. (I urge the reader who is not convinced to accept my use of the term vernacular in this and the following paragraph to read Appendix A at this time.) Take for example the observation that in all theoretical contexts other than architectural history and theory, the term "vernacular" is indeed an ahistorical descriptor meaning literally the mode of expression of a group or class, and it is easily applied across time to various modes of expression common, idiomatic, and endemic in a period, place, or group. It is clear that the term is free to move with time. The greatest degree of architectural historical specificity we require of the term is that it function as a label for the approach to building common to a given period, place, or group. My claim is that we need to rehabilitate our use of the term in architecture. We need to recognize that we have all along been using it to describe social, cultural, and economic forms of *regulated knowledge of building*. That definition of the term vernacular in architecture

(a form of regulated knowledge of building) is ahistorical, it is the ahistorical usage I recommend we adopt, which is also quite synonymous with its usage more generally.

What is special about reviving the use of the term vernacular as we speak about contemporary as well as historical architecture is the fact that every social group, period, or place has its own vernacular, to which architects can stand in some relevant relation. It is more important to good scholarship to allow the continued use of the term, in order to compare innovative production to its relevant context of vernacular production, than it is to avoid using it out of deference to something like that earthy, tribal, indigenous buildings sense of historical fixity that its usage holds in architectural discourse. The usefulness of the term in contemporary as well as historical analysis is precisely the reason for my efforts (in Chapter 2 and Appendix A) to rehabilitate its use in architectural discourse. It plays a supporting role in the development of my arguments, such as my discussion that concludes Chapter 2 on the theories, tactics, and strategies that may enable an innovative architect to have a sustainable career of prolonged creative influence within the field of building, as well as in Chapter 3, where I develop criteria for applications of technology that may enable architectural production from a position of power within advanced capitalist relations.

Since Chapters 1, 2, and 3 each cover a diverse range of content, I want to indicate here the connection I try to draw between them. There is a conceptual line from the discussion of Piranesi in Chapter 1, through the idea of our cognition of a split between subjective and objective relations expressed several ways in Chapter 2, to the idea in Chapter 3 that the subjective-objective splits experienced under capitalism can translate in the computational realm into digital tools that can enable the “decontextualization” of architects’ needs, which can enable an architect to have a sustainable career of prolonged creative influence in the field of building. I can explain this conceptual line as follows. It begins with Tafuri’s claim that Piranesi’s work can be read as delineating the shape of the capitalist landscape. Whether or not Tafuri is overreading Piranesi, what is important is that we can now imagine the *Campo Marzio* and *Carceri* series by Piranesi as illustrations of the tensions inherent in aesthetic production under capitalism. Tafuri’s reading of these engravings and etchings makes us think about the technical problems and the social implications of the spread of capitalist development in its extreme conclusions, allowing us to

see these works as renderings of the conflict between our freedom and the burden of responsibility for our actions that liberal individualism forces upon us. Liberal individualism is no panacea, since that conflict has to be managed internally by each individual, and we have to manage that conflict externally in what we choose to build and how we choose to expand “the city.” For example, Tafuri reads *Campo Marzio* as an illustration of the physical manifestation of that conflict in actual three-dimensional space, and he reads the *Carceri* as an illustration of the social-psychological manifestation of that conflict. For Tafuri, *Campo Marzio* shows that the development of “the city” requires that conflict to be managed by those who attempt to plan urban development. It also shows that ever since the Enlightenment (without ancient constraints such as monarchies or religious conventions), managing to place just the right amounts of restraint on urban development has become a huge secular debate (a problematic, inefficient, disorderly process) which we are “condemned,” in Tafuri’s words, to participate in continuously. Tafuri’s reading of the *Carceri* is that the infinite-looking space of Piranesi’s prisons corresponds to our feeling of the lack of any social or psychological center in capitalist relations. In the *Carceri* we see the image of a social environment like the market—a place where the cacophony of the competing, self-interested “reason” of so many individual actors appears as an irrational, disorderly totality. The image is of something that tends to expand toward the infinite by colonizing most forms of relations, both locally and globally.¹

The fact that Piranesi’s etchings are over 230 years old reminds us that already centuries have passed during which the speed of commercial development and the growth of science, cities, reason, and techniques have repeatedly outpaced the abilities of many to technically realize aesthetic inventions in a meaningful way. It is then easy to comprehend how, since at least the early twentieth century, theorizations of the social and psychological experiences of capitalism (by Simmel, Freud, and others) arrive at various descriptions of splits between subjective and objective reasoning. As I discuss in Chapter 2, business interests and the rationale of the general market of building production can bear the mantle of rational, objective discourse, leaving us free to define as subjective (or irrational), in contradistinction (and by default), anything that opposes the rational discourse. Capitalism as the overarching political economy within which

¹ Manfredo Tafuri, *Architecture and Utopia: Design and Capitalist Development* (Cambridge: MIT Press, 1976), 15–18.

aesthetic production takes place is what foregrounds the need for objective (over subjective and aesthetic) relations in professional interactions. My discussion in Chapter 2 deals with the individual's ability to maintain a subjective-objective split as a mental and professional capacity that is useful toward the goal of defining where in this field of building power an architect might be seated. The idea that subjective intentions can be bracketed out by an architect aiming to succeed in this environment connects us to the idea, represented by Piranesi, that the reason of the marketplace is king, and it must be addressed in practice, no matter what might be the content of the marketplace. This has to be dealt with as an aesthetic producer, as does the interchangeability which is inherent in capitalism and is accelerated in the digital realm. I have attempted in Chapter 3 to translate these issues into the computational realm by developing my idea of the decontextualization of one's needs—the most important and final concept expressed in the chapter, and the end of the thread that I have drawn through the chapters.

Chapter 1

Architectural Theory and Capitalism: Manfredo Tafuri, Fredric Jameson, and the Idea That Architecture's Other Is the Economic

I. Introduction

In this chapter I review a specific trajectory of twentieth-century theoretical writings on architecture and its relation to capitalism. Manfredo Tafuri's work from the 1960s to the 1980s is the first to be considered because he is the singular, critical architectural historian to develop this theme with a focus on avant-garde production, its relation to the economy, and to the rest of society generally. Fredric Jameson's work of the 1980s is then reviewed because he carefully considered Tafuri's work at a time when he was developing his own idea that "postmodern aesthetics," in all the arts, is our "cultural dominant" under postmodern capitalism (which he, like many, has periodized as the present phase of capitalism). Moreover, I consider Jameson because architectural historians themselves invited him to the architectural critical theory debate. In the early 1980s the architectural historians in the reading group Revisions specifically requested him to write a consideration of both architectural production and Tafuri's theoretical work in connection with Jameson's emerging ideas on postmodernism. Jameson did that, yet architectural critical theorists have not substantially contested nor even substantially reviewed his findings on architecture's and Tafuri's theoretical possibilities. Therefore I make such a review of Jameson here, and I conclude this chapter with a detailed analysis of what Tafuri and Jameson accomplished and what they left undone regarding the theme of architecture and its relation to the economic realm.

II. Reconstructing Tafuri's Concerns

To penetrate the body of work of a complex theorist such as Tafuri, the best approach is to read all of his relevant work together and break down its content into the major themes he presents repeatedly. To understand Tafuri's considerations of architecture and the economic realm, I have

broken down the complexity of his writings into major streams of his thought and focused on what he said about the role of architecture and the economy within each stream.

From my reading of *Architecture and Utopia*, *Theories and History of Architecture*, and *The Sphere and the Labyrinth* (and his article-length texts, such as “Toward a Critique of Architectural Ideology,” that contributed to or ended up as chapters in those books), I have found three streams of thought that are critical to my understanding of Tafuri’s concept of the relation between architecture and the economy. These are (1) Tafuri’s structuring of architectural history from the Enlightenment to the 1970s, (2) his definition and use of the term “operative,” as in the operative practices of critics, historians, and capitalist planners, and (3) his presentation, often considered nihilistic, of the problems for contemporary critics, historians, and especially practitioners, given architecture’s role in capitalist development. I cover each of these streams of thought in the three sections that follow. By carefully combining content from each of Tafuri’s books just mentioned, I am able to explain, as simply as possible, what Tafuri thought the real relationship and possibilities are between architecture and the economic realm. This approach thus produces an analysis of Tafuri with a focus on this dissertation’s theme, while avoiding being distracted by the overarching themes of each of his books, or the episodic histories and stories of each of the architects and periods he treats along the way.

Tafuri on Architectural History—Enlightenment to the 1970s. On several occasions Tafuri finds it suitable to begin his analysis (chronologically speaking) at precisely that point where he can readily identify, and explain for his purposes, the impact of Enlightenment thinking on the production of buildings.¹ He identifies “Enlightenment” more broadly than its usual eighteenth-century periodization, as a movement in which human reason turns to the authority of capital and accumulation² and away from deities, political monarchs, and the ancien régime as justification for architectural work. For example, Tafuri begins historical analyses in both *Theories and History of Architecture* and *Architecture and Utopia* by looking at the Tuscan humanist architects

¹ In *The Sphere and the Labyrinth* (Cambridge: MIT Press, 1987), Tafuri “begins” (chronologically speaking) with Piranesi; whose thinking is as important as the impact of Enlightenment thinking to Tafuri’s historical analyses.

² Manfredo Tafuri, *Theories and History of Architecture* (New York: Harper & Row, 1980), 146.

(particularly Brunelleschi and Alberti), and the components of their thought that could be seen as precursors to Enlightenment ideas.³

Tuscan humanists developed the moderate (reformist rather than revolutionary) belief that tradition could and should be used to promote change. By reworking the tools of antiquity, they reshaped their own time. As seventeenth and eighteenth century economic forces interacted profoundly with these intellectual trends, the Italian, French, and English mercantile class—the bourgeoisie—pressed the idea that political economic relations need not go on as they had for centuries. New charters could be written, new laws passed, new businesses begun, new governments formed. The Enlightenment bourgeoisie remained aware that they were supporting an expensive aristocracy unwilling to share power with them, although they actually managed—and to their way of thinking created—the national wealth. Not in Italy or England but primarily in France did the intellectual bourgeoisie look for and find allies among the impoverished masses. In general, Enlightenment intellectuals were bourgeois, and convinced that their earnings were solely the result of individual merit and hard work, unlike the inherited wealth of traditional aristocrats or the inherited inferior position of the lower classes.

As a Marxist historian, Tafuri generally denounces such liberalistic European Enlightenment thinking for promoting primarily individualism, a laissez-faire economy, and the ideals and power of the bourgeoisie at the expense of the lower classes. That stance allows him to repeatedly key in on the distinctions among reformist, rear guard, and revolutionary architectural work. He also repeatedly keys in on the distinctions (defined through his examples) between the critical use of history, and the acritical, absent-minded, or conservative use of history in

³ Tafuri, *Theories and History of Architecture*, 14–16; Manfredo Tafuri, *Architecture and Utopia: Design and Capitalist Development* (Cambridge: MIT Press, 1976), 10. For Tafuri “the revolution of modern art carried out by the Tuscan humanists of the Quattrocento” is also the origin of “history arbitrarily censured by the artistic avant-gardes.” He writes that “Brunelleschi institutionalized a linguistic code and a symbolic system based on a superhistorical comparison with the great example of antiquity,” and that Alberti “began to explore rationally the structure of that code and its ... emblematic values.” According to Tafuri it is absolutely critical to acknowledge that these Tuscan humanists represent a first—a plausible starting point for him regarding modern architectural history and Enlightenment-type thinking—because they were the first to “*actualize* historical values ... into present time” and to translate “archaic meanings” and “ancient ‘words’ into civil actions” (Tafuri, *Theories and History of Architecture*, 14–15).

architecture. Simply stated: Tafuri writes with a Marxist view of history. But one of his greatest metaphors in the writing of history, and his biggest trope, is his intellectual invention that Giovanni Battista Piranesi also personified these distinctions in his work.

According to Tafuri, Piranesi is that single, eighteenth-century figure able to sum up and illustrate the tensions inherent in modern artistic production. Tafuri believes (and he notes a study by Wittkower⁴ for backup) the tensions inherent in modern artistic production indicate a “division had already been prophesied by G. Battista Piranesi,” and that Piranesi “opens the door to modern architecture and, at the same time, becomes its most merciless critic.”⁵

How does the figure of Piranesi do all this? Tafuri builds the case that Piranesi consciously represented—in their extreme conclusions—the theoretical rifts between modern economic development, architecture, and the city. He builds the case, and Piranesi illustrates it, that these tensions were brought on by capitalist development, and were precisely what early modern art and architecture struggled with. For example, Tafuri’s favored reading of Piranesi’s *Campo Marzio* and *Carceri* is to describe them as illustrations knowingly created to demonstrate certain concepts brought into an “erupting contrast”⁶ not only in the age of reason in which Piranesi lived, but also as their conflicts would evolve during nineteenth and early twentieth-century modernization.⁷ For Tafuri the *Campo Marzio* best represents the technical problems, and the *Carceri* series the social implications of the rational/irrational spread of metropolitan development. Tafuri wrote, “Essentially it is the struggle between architecture and the city, between the demand for order and the will to formlessness, that assumes epic tone in Piranesi’s *Campo Marzio*.”⁸ Tafuri wrote that in the *Carceri* “the space of the building—the prison—is an

⁴ Tafuri, *Theories and History of Architecture*, 68.

⁵ Tafuri, *Theories and History of Architecture*, 26.

⁶ Tafuri, *Architecture and Utopia*, 11.

⁷ Tafuri reads Piranesi as a predictor, for example, of art nouveau and futurist techniques to deal with each of those movements’ original—but according to Tafuri, anti-historical—ideals in uneasy conflict with their “expectation of a cathartic future” (*Theories and History of Architecture*, 31).

⁸ Tafuri, *Architecture and Utopia*, 16. For Tafuri, Piranesi’s *Campo Marzio* illustrates the idea, regarding the metropolitan spread of development, that “this colossal piece of *bricolage* conveys nothing but a self-evident truth: irrational and rational are no longer to be mutually exclusive” (*Architecture and Utopia*, 15).

infinite space. What has been destroyed is the center of that space, signifying the correspondence between the collapse of ancient values, of the ancient order, and the ‘totality’ of the disorder. *Reason*, the author of this destruction—a destruction felt by Piranesi to be fatal—is transformed into irrationality. But the prison, precisely because infinite, coincides with the space of human existence. ... What we see in the *Carceri* is ... the new existential condition of human collectivity, liberated and condemned at the same time by its own reason. And Piranesi translates into images not a reactionary criticism of the social promises of the Enlightenment, but a lucid prophecy of what society, liberated from the ancient values and their consequent restraints, will have to be.” Namely, the experience of “an anguish generated by the anonymity of the person and the ‘silence of things.’”⁹

Tafuri then takes up eighteenth- and nineteenth-century naturalism and the picturesque in architecture and architectural theory as a foil to Piranesi, reading it as a rear guard movement. Because of his materialist reading of history, Tafuri is anti-picturesque because he is in fact pro-development, as an engine of human progress, so long as it is demonstrably beneficial across class lines, not simply liberal capitalist development. The rear guard logic Tafuri sees in the picturesque is not reason made operative to advance development. Tafuri reads “the insertion of the picturesque into the city and into architecture” as tending to “negate the now obvious dichotomy between urban reality and the reality of the countryside.”¹⁰ Focused on the relevance of each aesthetic theory to what material developments it could have/should have fostered in its time, Tafuri reads naturalist picturesque theories in architecture as attempts to focus on the past, or as proving today that some perception of the past remains palatable to some audience. To Tafuri this is a misdirected expenditure of modern intellectual effort. He writes that while eighteenth- and nineteenth-century naturalism in architecture does not advance the plan of capital, it was not a reform movement either since its rear guard effect was simply to discourage, rather than condition the formation of global models of development.

Given his interest in the growth of social equilibrium along with development, Tafuri needs in his historical analyses to constantly discern in which building projects, programs, and

⁹ Tafuri, *Architecture and Utopia*, 18, 19.

¹⁰ Tafuri, *Architecture and Utopia*, 8.

movements aesthetic theories discouraged, rather than conditioned, the formation of global models of development. Tafuri uses the term development in a most general sense to refer to a growth force—of capital, of property, of cities, etc.—that expands a culture economically and geographically. The degree to which a development project would foster social equilibrium is the measure by which he judges its revolutionary character. Similarly, he judges its critical use of history by the degree to which a development’s planners show they learned from history how to ward off much of their development’s co-option by forces that would *not* use them to foster social equilibrium. Tafuri only accepts the following, absolutely minimal, positive value regarding liberal capitalism: that due to its lack of interest in social equilibrium it is nothing other than an unprecedented productive force. This is that productive force he will repeatedly refer to as development, and which he wants to condition toward social equilibrium.

Tafuri makes his argument that the picturesque was a rear guard movement through his analysis of city planning and the figure of Thomas Jefferson. He points out that the most economically functionless city in the United States—Washington, DC—was politically planned via a picturesque approach, while the most economically productive urban developments in America—New York, Chicago, and Detroit—were pragmatically developed to enable capitalist development and relegated picturesque planning techniques to bracketed-out spaces such as public parks.

He observed that Jefferson theoretically wrestled with the socioeconomic implications of capitalist development’s perceived need to continually expand. Of this Tafuri writes:

An integral part of Jefferson’s architectural ideas and undertakings is his agrarian and antiurban politics. ... With him came into being “radical America,” or rather the *ambiguous conscience* of American intellectuals, who acknowledge the foundations of the democratic system while opposing its concrete manifestations. Seen in this light Jefferson’s democracy was again a utopia, but no longer of the vanguard; rather, it was a utopia of the rear guard. (In passing we may note the ideological affinity between

Jefferson and Frank Lloyd Wright, discussed by such critics as Fitch and Scully.)¹¹

This point is sharply reinforced as Tafuri contrasts it with the views on democratic capitalism of Alexander Hamilton, who interpreted the aims of the political situation to be economic, and pursued an accelerated development of American financial and industrial capital. Essentially, Tafuri is the first historian to point out that the Jeffersonian strain of modern planning is the guilty conscience of architectural intellectuals cognizant of, but not at all comfortable with accepting, the tragic impact of capitalism on our way of life, and our way of building our environment.

Tafuri goes on to view most American and European architectural thinking of the last century as having more or less followed the emphasis of the (non-Jeffersonian) economics-centered American cities (other than Washington). He writes that “the subject of the *Grossstadt* dominates the thought of Simmel, Weber, and Benjamin, with obvious influence on architects and theorists such as August Endell, Karl Scheffler, and Ludwig Hilberseimer.” Tafuri is sure that “the ‘loss’ foretold by Piranesi has now become tragic reality,” that “the experience of the ‘tragic’ is the experience of the metropolis.”¹² For Tafuri the issue that architectural theorists such as Hilberseimer deal with has become “the ideology of consumption ... only a moment of the ideology of the city ... as an instrument of coordination of the production-distribution-consumption cycle ... must be offered to the public as the ideology of the correct use of the city.”¹³

Psychologically, according to Tafuri, “the problem now was that of teaching that one is not to ‘suffer’ that shock, but to absorb it as an inevitable condition of existence.”¹⁴ He sees the

¹¹ Tafuri, *Architecture and Utopia*, 26–27.

¹² Tafuri, *Architecture and Utopia*, 78.

¹³ Tafuri, *Architecture and Utopia*, 83–84.

¹⁴ Tafuri, *Architecture and Utopia*, 86. See also pp. 90–91: “Ready-made objects, introduced ... by Braque and Picasso ... [and] Duchamp, sanctioned the self-sufficiency of reality and the definitive rejection, by reality itself, of any representation. The painter could only analyze this reality. ... By now it was form which dominated the painter. Except that now form had to be understood as the logic of subjective reactions to the objective universe of production.” And see

following tasks then set out by the avant-garde: “Free the experience of shock from any automatism; found, on the basis of that experience, visual codes and codes of action transformed by the already consolidated characteristics of the capitalist metropolis (rapidity of transformation, organization and simultaneousness of communications, accelerated tempo of use, eclecticism); reduce the artistic experience to a pure object (obvious metaphor for object-merchandise); involve the public, unified in an avowed interclass and therefore anti-bourgeois ideology: these are the tasks that all together were assumed by the avant-garde of the twentieth century.” He clarifies that he means this regarding aesthetic theory from one end of the political spectrum to the other.¹⁵

Artistic production then, according to Tafuri, is so completely affected by capitalist development that now it is “born with the precise purpose of being rapidly consumed,” and so “the condition necessary to reach this objective is the contemporary consumption of the entire past, whose presence carries the memory of an extinct way of producing *values*, a disturbing and dangerous memory because of the illusion of the possible return to a sacral conception of artistic activity. This is the reason why all avant-garde movements see in history a *danger* for modern art.” Thus, in Tafuri’s reading, both Wright and Le Corbusier saw the coherence, permanence, and immutability of preindustrial towns as a threat, “as dangerous challenges to modern urban planning.” Tafuri believes that explains why architects such as Wright and Le Corbusier theorized and planned along the lines of “preserving” old town centers, since “in a certain light they are considered models” and their preindustrial organization must somehow “expel from itself the post-industrial alterations that compromise its readability.”¹⁶ Note that separating the preexisting fabric from new architectural production is a strategy Tafuri also read in Brunelleschi and Alberti much earlier, as they tended, on his reading, to put urban history and new interventions in a dialectical relationship.

also pp. 91–92: “The public had to be provoked. Only in this way could it be actively introduced into the universe of *precision* dominated by the laws of production. ... The *blasé* attitude had to be transformed into effective participation in the urban scene.”

¹⁵ Tafuri, *Architecture and Utopia*, 84.

¹⁶ Tafuri, *Theories and History of Architecture*, 46, 49. I should be noted that some historians, notably Diane Ghirardo, disagree with Tafuri’s view here.

It is this separation—of the preexisting fabric from new architectural interventions—that Tafuri sees as the tragic implication for modern architecture. For by creating a too simple and false opposition between proposals such as the Athens Charter and the figurative unity of the historical city centers, by producing a neat cut between the ancient and the new, the historical city centers “were reduced to unusable *fetishes*,” became objects to be defended, in this way reduced to myth. The result of this according to Tafuri is that “modern architecture was pushed into ‘game reserves’ to enjoy a freedom that was not made use of when the moment came.” He writes, “Conservation has been reduced to a problem of urban stage-designing,” where giving up reconfiguring the city means giving up understanding it critically.¹⁷

As Tafuri turns his historical analysis to the early twentieth century, he has already ruled out several alternative readings of the social motives of the modernist avant-gardes of the 1920s and 1930s. His reading is that the most progressive avant-gardes made their work as examples to lead economic development in a socially progressive direction. This idea of giving direction to economic development revolves around what he will continue to refer to as “the plan” of development. It is necessary to define how he uses this term: to indicate a liberal capitalist conception of development. The ideology of this “plan” resembles its Hamiltonian, not its Jeffersonian conception (Jeffersonian and picturesque development ideals being capitalist rear guard). This “plan,” liberal capitalist rather than socialist in its application, is associated with the main thrust of American urban development, and has a naturally chaotic growth path (the catalyst of our “anguish”). It is important to remember how central to Tafuri is the idea that there can be a capitalist as well as a socialist ideology of the plan. One can be pro-development yet not capitalist, as when one strives to put to use the unprecedented modern forces of production only toward socially just ends.¹⁸ According to Tafuri, architecturally the liberal capitalist conception of development has resulted in the fragmentation of, and demotion of, the architectural object to a small moment within its overall framework that prioritizes only further development. From its

¹⁷ Tafuri, *Theories and History of Architecture*, 57–58.

¹⁸ “Organization and planning are thus the passwords of both democratic socialism and democratic capitalism, Rathenau and Naumann are its spokesmen. And indeed we should not forget Naumann’s decisive role in the formation of the ideology of the Deutscher Werkbund between 1907 and 1918.” And on *Architecture and Utopia*, 70, Tafuri confirms Naumann’s role was decisive as “ideology was transformed into *capitalistic-industrial utopia*.”

liberal Enlightenment beginnings to its twentieth-century application of Keynesian tactics, the liberal capitalist ideology of the plan manages its own crises, which serves to ward off socialist critiques just as those critiques become aroused. The reading, not without precedent, that the Keynesian management of crises gives a sort of self-propelling momentum to the liberal capitalist ideology of the plan is central to Tafuri's understanding of it.¹⁹ Because it is perfectly analogous, it is my reading that this sense of self-propulsion contributed to Tafuri's reading that "all the historical avant-garde movements arose and succeeded each other according to the typical laws of industrial production."²⁰ For example, writing in that vein he states:

De Stijl and the Bauhaus introduced the *ideology of the plan* into a design method that was always closely related to the city as a productive structure. Dada, by means of the absurd, demonstrated—without naming it—the necessity of a plan. ... *De Stijl*—and for that matter Russian Futurism and the Constructivist currents—opposed Chaos, the empirical, and the commonplace, with the principle of Form. ... Chaos and order were thus sanctioned by the historical avant-garde movements as the "values," in the proper sense of the term, of the new capitalist city.²¹

He writes that although the democratic capitalist ideology of the plan is chaotic, "form is not sought outside of chaos" but within it. It is order that confers significance upon chaos and transforms it into value, into "liberty." It follows, then, that with "Le Corbusier's *Plan Voisin* (1925) and the transformation of the Bauhaus (1923) ... starting from the particular sector of building production ... architecture and urbanism would have to be the objects and not the subjects of the Plan. Architecture between 1920 and 1930 was not ready to accept such consequences."²²

¹⁹ This was an existing intellectual concept. See for example the section on John Maynard Keynes in Robert Heilbroner, *The Worldly Philosophers: The Lives, Times and Ideas of the Great Economic Thinkers* (1953; rev. ed., New York: Simon and Schuster, 1961), 214–251.

²⁰ Tafuri, *Architecture and Utopia*, 84–85.

²¹ Tafuri, *Architecture and Utopia*, 93, 96.

²² Tafuri, *Architecture and Utopia*, 96, 100.

Many of the contradictions and obstacles the modern movement encountered stemmed from the attempt to separate technical propositions from creative aims. ... Next to the oases of order of the *Siedlungen*, the experimental quarters or settlements ... the historic centers and the productive areas of the city continued to accumulate and multiply their contradictions. And these were in large part contradictions that soon became more decisive than the means architecture had devised to control them.²³

At this point in his historical analysis (the 1920s and 1930s), Tafuri has made the case that the course of development of the capitalist city presents contradictions to both architects and planners, and brings to the fore the contradiction inherent to liberal capitalism itself, namely that as a system for the management of the political and economic consequences of growth it frequently enables development that may benefit one group while oppressing another. Tafuri has already named and described attempts of architects and planners to remediate or solve such contradictions.²⁴ These he categorizes as (1) rear guard solutions which can remain only utopias

²³ Tafuri, *Architecture and Utopia*, 109.

²⁴ “The two poles represented by Expressionism and the *Neue Sachlichkeit* again symbolize the inherent division of European artistic culture. ... On the one hand, intellectuals who reduced their own ideological potential to the instrumentation of advanced programs for a production system in the course of reorganization, and, on the other hand, intellectuals who worked by taking advantage of the backwardness of European capitalism. Seen in this light the subjectivity of Häring or Mendelsohn assumes a critical significance in respect to the Taylorism of Hilberseimer or Gropius.” (Tafuri, *Architecture and Utopia*, 110.) Elsewhere he similarly wrote of the central European modernists: “Improbability, multifunctionality, multiplicity, and lack of organic structure—in short, all the contradictory aspects assumed by the modern metropolis—are thus seen to have remained outside the attempts at a rationalization pursued by central European architecture” (*Architecture and Utopia*, 124). “Objectively, however, this was a criticism made from a rear-guard position and thus incapable [like Jefferson] of imposing universal alternatives” (*Architecture and Utopia*, 110–112).

Despite having identified the significance of those two strains of European modernist architectural theory, Tafuri argued that “to present the course of architecture of the twentieth century as a single, unitary cycle is not completely wrong” (*Architecture and Utopia*, 112). This is due to his reading that “these experimental quarters [the housing project or settlement] were part of a global antiurban ideology [which] went back to that of Jefferson ... the postulate of the intrinsic negativeness of the city. ... The settlement itself openly set the model of the ‘town’ against that of the large city. This was Tönnies against Simmel and Weber. ... Ernst May’s Frankfurt ... was ... a generally antiurban proposal” (*Architecture and Utopia*, 119). “The antiurban utopias have their historical continuity reaching back to the era of the Enlightenment ...

in that they are unrealizable proposals, and (2) progressive solutions which are engaged in development, but which tend to become absorbed without greatly modifying the capitalist relations or their development. Such a fate (i.e. the absorption of progressive solutions without impact) is what has made Tafuri deduce that it was natural, among the aesthetic production of the most socially progressive modernist avant-gardes, that first painting should be absorbed by architecture, then architecture by planning, and finally planning should be absorbed as a tool of the capitalist plan of development.²⁵

I have summarized the problem of capitalist development for architects and planners in the 1920s and 1930s as Tafuri sees it, because that is the context in which he introduces the sole figure—Le Corbusier—whose urban plans he claims solved what could be solved of that problem.²⁶

According to Tafuri, what was then required of urbanism was to

absorb that multiplicity [of the city], reconcile the improbable through the certainty of the plan, offset organic and disorganic qualities by accentuating their interrelationship, demonstrate that the maximum level of programming of productivity coincides with the maximum level of productivity of the spirit: these are the objectives delineated by Le Corbusier with a lucidity that has no comparison in progressive European culture.

In setting out these objectives Le Corbusier is conscious of the threefold front ... that, beyond production itself, distribution and consumption are the determining factors of the cycle. ...

and embrace the theory of the Garden City, Soviet decentralization, the regionalism of the Regional Planning Association of America, and Frank Lloyd Wright's Broadacre City. ... Antiurban ideology is always presented in anticapitalist guise ...it is inevitably destined to be reabsorbed and deformed by the contingent needs of an opposing set of circumstances" (*Architecture and Utopia*, 120–122).

²⁵ And according to K. Michael Hays, this is what makes Tafuri's ideological position pessimistic, since his "dialectical historiography allows architecture no purchase in the creases of history's flow but, rather, wraps it so tightly in an ideological veil of intellectual, cultural and economic forces that it can hardly be extricated." As well according to Fredric Jameson, this is what makes Tafuri's position "perhaps the bleakest of all and the most implacably negative." Both in K. Michael Hays, ed., *Architecture Theory since 1968* (Cambridge: MIT Press, 1998), 440.

²⁶ Tafuri, *Architecture and Utopia*, 125.

From 1929 to 1931, with the plans for Montevideo, Buenos Aires, San Paulo, Rio, and finally with the Obus plan for Algiers, Le Corbusier formulated the most elevated theoretical hypothesis of modern urbanism. It is, in fact, still unsurpassed from the point of view of both ideology and form.

...

At Algiers the old Casbah, the hills of Fort-l'Empereur, and the indentation of the coastline are taken up as material to be reutilized, actual *ready-made objects* on a gigantic scale. ...

The economic premise of the whole operation is therefore clear. The Obus plan does not require merely a new land statute that by overcoming the anarchic paleocapitalist accumulation of terrain makes all the city soil available for a total and organic reorganization, becoming thus an urban system in the proper sense of the term. In this case the complete availability of the terrain is not enough. The fact is that the industrial object does not presuppose any single given location in the space of the city. Serial production here basically implies a radical overcoming of any spatial hierarchy. The technological universe is impervious to the *here* and the *there*. Rather, the natural place for its operations is the entire human environment—a pure topological field, as Cubism, Futurism, and Elementarism well understood. Thus in the reorganization of the city it is the entire three-dimensional space that must become available. ... What emerges is the positive quality of the contradictions, the reconciliation of the irrational and the rational, the “heroic” composition of violent tensions.²⁷

After making that formal and functional analysis of the key components of Le Corbusier’s urban plans, Tafuri also investigates the reasons that none of them were realized.²⁸ He points out that Le Corbusier’s urban plans were essentially his own “invented commissions” with no obvious

²⁷ Tafuri, *Architecture and Utopia*, 125, 127–129.

²⁸ Tafuri, *Architecture and Utopia*, 133. “We must now try to answer the obvious question. Why did Le Corbusier’s plan for Algiers, as well as his later plans for European and African cities and even his lesser proposals, remain a dead letter?”

promise to build them coming from relevant local or state officials.²⁹ However, the question of real interest to Tafuri is why Le Corbusier's urban plans did not influence the development of any city, if only as sketch models that could have influenced urban development elsewhere.³⁰

To understand Tafuri's answer, I believe we have to remember that he reads the urban plans of Le Corbusier as solutions to the "problem" of the 1920s and 1930s mentioned above. Essentially Tafuri reads them as being offered in the interest of bettering humanity's daily experience under the impact of liberal capitalist development. Tafuri reads Le Corbusier's plans as an urban tonic, specifically concocted to mitigate known pains of both the lower and the upper classes, associated, respectively, with living and working and with developing real estate and businesses, under the capitalist economic system. It is my reading that Tafuri sees the many aspects of Le Corbusier's urban plans (housing, his thinking about infrastructure, his accommodations to commercial development) as concessions offered to abate the contradictions and rough edges of capitalist development as they rub up against the individual, the urban planners, the infrastructure planners, and the individual corporate leaders (i.e. the "industrial vanguard")³¹ in each of their attempts to lead private lives, plan growth, and exploit the land or develop commercial enterprises, whichever their vocation may be.

With such a wide range of issues to have solved—in unison—the obvious reason Le Corbusier's urban plans remained unbuilt is that they would have required the coordination of too many individual economic entities, each already with much easier, less coordinated paths to profitable development through projects pursued on their own terms. The implausibility of Le Corbusier's urban plans also rests in that they required the coordinated use of real estate, either already in the hands of individual investors, whose cooperation would not have been forthcoming, or in governmental hands without the means of promising a reasonable return to so many individual

²⁹ Tafuri, *Architecture and Utopia*, 133, 134: "He was not, like Taut, May, or Wagner, associated with the local or state authorities ... without an official appointment or compensation. He 'invented' his commission."

³⁰ Tafuri, *Architecture and Utopia*, 134. "The general applicability of his hypothesis clashed with the backward structures it was intended to stimulate ... an economic and technological reality still incapable of assuming coherent and organic form ... Le Corbusier's hypothesis was regarded as utopian."

³¹ As Tafuri uses the term in *Architecture and Utopia*, 133.

entities. This remains the general case regarding development within a liberal capitalist system today.

While Tafuri may have recognized the reasons I have given for why Le Corbusier's urban plans remained unbuilt, the reason more important to him is found in the general tenor of his historical analysis.³² This can be described as nothing other than Tafuri's political viewpoint, his reading of history and events. By the time he is looking at the 1920s and 1930s in *Theories and History of Architecture* and *Architecture and Utopia*, for example, it is Tafuri's reading that a certain amount of pressure had built up, in the international political framework, for reforms to and concessions from capitalist development, and that this pressure had expressed itself in the Depression in America (and elsewhere) and the German situation at the end of the Weimar Republic.³³ As Tafuri saw those decades as a moment of maximum pressure for capitalist reform, he makes the case that the development and application of Keynesian economic principles, as if in the nick of time, made it unnecessary that the industrial vanguard should offer favorable plans to the public such as those proposed in Le Corbusier's urbanism.³⁴ Tafuri's interpretation of the situation is something to the effect that the industrial vanguard, upon considering going beyond such offerings as individual workers' housing and remote company town plans, may have considered offering urban plans along the lines of Le Corbusier's, but rather, applied techniques of anti-cyclical planning (and for socialist states; realized the First Soviet Five Year Plan). This made

³² Tafuri, *Architecture and Utopia*, 134: "On the other hand, the failure at Algiers—and Le Corbusier's 'failure' in general—cannot be correctly understood if not related to ... the appearance, just after the great economic crisis of 1929, of decisive new protagonists: the international reorganization of capital, the affirmation of systems of anticyclical planning, and the realization of the First Soviet Five-Year Plan."

³³ Tafuri, *Architecture and Utopia*, 63. "In the concrete historical reality of the years following 1917 and the Treaty of Versailles, ... profound contradictions shook European and American capitalism."

³⁴ The apparent timeliness, for capitalism's "survival," of Keynesian economic principles applied against early twentieth-century economic depression, communism and fascism, and as argued by Tafuri, is an argument commonly made by economic theorists and historians. See for example Heilbroner, *The Worldly Philosophers*, 214–251, and Joseph A. Schumpeter, *Ten Great Economists: From Marx to Keynes* (Phoenix: Simon Publications, 2003).

developments such as Le Corbusier's unnecessary to contemplate as a means to uphold the consensus around the liberal capitalist system.³⁵ Regarding this Tafuri writes:

Architecture as ideology of the plan is swept away by the *reality of the plan* when, the level of utopia having been superseded, the plan becomes an operative mechanism.

The crisis of modern architecture begins in the very moment in which its natural consignee—large industrial capital—goes beyond the fundamental ideology, putting aside the superstructures. From that moment on architectural ideology no longer has any purpose. The obstinate insistence on seeing its own hypotheses realized becomes either a surpassing of outdated realities or an importunate disturbance.

It is in this light that the involutions and anguished controversies of the modern movement since about 1935 up to today can be understood.³⁶

³⁵ In *Architecture and Utopia*, 134–135, on my reading, Tafuri sees that for the industrial vanguard to go so far as to engage Le Corbusier's plan and in so doing offer the working class a solution such as Algiers, and to go so far as to make the industrial vanguard cooperate to the extent necessary to have produced an Algiers-like solution, was not a necessary development for capitalists to undertake in order to ward off the crises presented by the post-1929 global economic situation and its pressure for more socialist policies. Tafuri indicates that the capitalist "plan" is able to manage crises so that cooperative, advanced planning, as well as greater shares in the stakes of development given to the working class, are not necessary. Although Tafuri mentions Deleuze and Guattari, he seems not to prefer their schizophrenia analog, and does not fully consider the similarities of theirs to his view on the ability of the plan to "learn" to manage itself. His is akin, on my reading, to Deleuze and Guattari's "anticipate/ward off" schema of capital's longevity. This is reinforced as Tafuri also noted that the issues and concessions at the center of the debate in the 1930s had already evolved, had transposed the conflicts to a higher level (due to technological as well as the plan's management advance), or another area of focus, or another economic sector, so that in subsequent decades, as well as for today's issues, the stakes call for different "solutions" anyway.

"It is significant that almost all the objectives formulated in the economic field by Keynes' *General Theory* can be found as pure ideology in modern architecture. 'Free oneself from the fear of the future by fixing the future as the present' (Negri): the basis of Keynesian interventionism is the same as that of modern art. And in a precisely political sense it is also at the base of Le Corbusier's theories of urbanism. Keynes reckons with the 'party of catastrophe' and tries to control its menace by absorbing it at an always new level. Le Corbusier takes account of the reality of class in the modern city and transposes the conflicts to a higher level" (on my reading: upper middle class at the fort, lower class on the front line along the sea). (*Architecture and Utopia*, 135.)

It is at that point that the chronology of Tafuri's historical analysis releases into the present. I mean this in the sense that, according to him, we are allowed to deal with all architectural phenomena from 1935 onward (from Le Corbusier's urban plans to the present), under the following, single critical framework: With the urban plans of Le Corbusier having been swept away by the reality of the plan, his level of utopia having been superseded, for the chronological remainder of his historical analysis Tafuri finds no architectural production able to advance in its thinking about capitalist development as greatly as Le Corbusier's urbanism had. While all architectural historians may not share this view, Tafuri sees the intellectualization of the problems of development up to the 1930s as a crest, while what follows through to the present is an ebb.³⁷ After the 1930s, he writes:

Utopia became of service to development as a reserve of tendentious models and as an arm for the extraction of consensus.

It is clear that these functions of utopia were to be in crisis each time the objectives of the tendentious models were required to prove themselves in reality, and each time that manipulation of consensus showed itself to be unsuited to the aims of development

³⁶ Tafuri, *Architecture and Utopia*, 135–136. “No longer Hegel but Keynes, not the ineffectual ideology of plans but the plan in the concreteness of its development, not the ideology of the New Deal but post-Keynesian economy. Ideology ... descends directly into individual fields of endeavor; which is the same as saying that it is suppressed. ... The dominion of capital is thus realized strictly in terms of the logic of its own mechanisms, without any extrinsic justifications, absolutely independent of any abstract ‘ethical’ end, of any teleology.” (*Architecture and Utopia*, 61–62.)

It is key to point out here that Tafuri believes once ideology is developed in individual fields of endeavor as a means of working out technical problems only within that field, any overall conception of, or critique of ideology is suppressed. Because of this, on my reading, and this interpretation is also made separately by Mary McLeod, Tafuri sees the architects only course to a revolutionary practice laying outside the traditional boundaries of the field. See Mary McLeod in the introduction to Joan Ockman et al., eds., *Architecture, Criticism, Ideology* (Princeton: Princeton Architectural Press, 1985), 11.

³⁷ Regarding the avant-garde of 1900 to the 1920s, “Ultimately the problem is that of evaluating the significance given in the early part of our century to *utopia as a project*. ... The unproductiveness of intellectual work was the crime that weighed upon the conscience of the cultural world of the nineteenth century, and which advanced ideologies had to overcome. To turn ideology into utopia thus became imperative.” (Tafuri, *Architecture and Utopia*, 50.)

Instead of really choosing between the aspiration to absolute autonomy or voluntary self-effacement in a mission of “class service,” ideology ended, in most cases and with a surprising consistency of behavior, by precariously straddling the borderline between these two choices.³⁸

He is especially disappointed by pop art and the post modern architectural production in the 1960s and 1970s, that which embraces the presence of consumption, and cultural relativity, essentially works enabled by Venturi’s theoretical framework. Tafuri writes that for this work, “it is necessary to persuade the public that the contradictions, imbalances, and chaos typical of the contemporary city are inevitable. Indeed the public must be convinced that this chaos contains an unexplored richness, unlimited utilizable possibilities, and qualities of the ‘game’ now made into new fetishes for society.”³⁹ And in this sort of work, Tafuri writes, we see,

The contradictions of the contemporary city are resolved in multivalent images, and by figuratively exalting that formal complexity they are dissimulated. If read with adequate standards of judgment this formal complexity is nothing other than the explosion of the irremediable dissonances that escape the plan of advanced capital. The recovery of the concept of *art* thus serves this new cover-up role. It is true that whereas industrial design takes a lead position in technological production and conditions its quality in view of an increase in consumption, pop art, reutilizing the residues and castoffs of that production, takes its place in the rear guard. But this is the exact reflection of the twofold request now made to the techniques of visual communication. Art which refuses to take its place in the vanguard of the production cycle, actually demonstrates that the process of consumption tends to the infinite. Indeed even the rejects, sublimated into

³⁸ Tafuri, *Architecture and Utopia*, 72.

³⁹ Tafuri, *Architecture and Utopia*, 139.

useless or nihilistic objects which bear a new *value of use*, enter into the production-consumption cycle, if only through the back door.⁴⁰

It can be seen that Tafuri's historical analysis ends (chronologically) with his observation that contemporary practicing architects were not significantly concerned with, or focused upon, the issues he foregrounds as key throughout the time span covered by his analysis.⁴¹

Tafuri on the Use of the Term “Operative” and Operative Practices. Tafuri directly acknowledges that he and other historians intentionally operate upon historical material. According to Tafuri, historians and critics never present objective accounts, rather they project a specific historiographic model and an “‘intentioned’ reading of history” so that their “hypothetical historiographical ‘models’” can convince us there are structural similarities among several periods that perhaps remain separate, distinct periods according to the views of other historians.⁴² He believes that all historians operate this way, to the point that the classification of history into periods becomes the instrument for an “intentioned” reading of history. This is to Tafuri an operative methodology at work. By way of defining the term, he writes: “What is normally meant by *operative criticism* is an analysis of architecture (or of the arts in general) that, instead of an abstract survey, has as its objective the planning of a precise poetical tendency, anticipated in its structures and derived from historical analyses programmatically distorted and finalized.”⁴³ It is “the attempt to *actualize* history, to turn it into a supple instrument for action” and “the revaluation of everything in the past that might be taken as a precedent,” where “the past is continually used as a confirmation of the present: history legitimizes what is already there” and “the new is justified by deforming the past.”⁴⁴ “Operative criticism is, then, an

⁴⁰ Tafuri, *Architecture and Utopia*, 137. In a similar vein, Tafuri writes of formalism per se that “there is the plunge backward, the ‘courage to speak of roses,’ the foundering in the ‘happy era’ of bourgeois *Kultur*: ideology as ‘sublime’ uselessness. But it is not by pure chance that historically the fate of formalism is always to end by the *work on form* being used for advertising.” (*Architecture and Utopia*, 163.)

⁴¹ This lack of focus is also described by Tafuri in *The Sphere and the Labyrinth*, 293 and 301.

⁴² Tafuri, *Theories and History of Architecture*, 209.

⁴³ Tafuri, *Theories and History of Architecture*, 141.

⁴⁴ Tafuri, *Theories and History of Architecture*, 149, 150, 153, 150.

ideological criticism (we always use the term ideological in its Marxian sense): it substitutes ready-made judgments of value (prepared for immediate use) for analytical rigor.”⁴⁵

To Tafuri, the operative critic argues that a favored architecture acquires aesthetic capital as the critic reads, then writes history and theory so that it appears natural that the favored approach was “anticipated in its structures and derived from historical analyses” made more or less objectively by the critic. In other words, operative critical analyses advance a particular aesthetic approach by constructing historical analyses where the traits of precedent, already-canonical approaches are invoked and connected to the approach presently being advocated. This type of criticism rejects failures and dispersions throughout history to “force history.” The effect of which, according to Tafuri, is that operative criticism invests history with a strong ideological charge. Operative criticism, not satisfied with the simple registering of what is happening, anticipates “the ways of action” and takes an attitude “contesting towards past history, and prophetic towards the future of aesthetic and political developments.”

Insightfully Tafuri questions its effectiveness as he points out that operative historiography, as “an incessant polemical operation,” will “produce a *short-lived*, consumable (even rapidly consumable) literature ... as the judgments of value are measured by the pregnancy of events, and as planning behavior—explicitly conditioned by consumption—is the model.”⁴⁶ He also sees aesthetic works as made operative specifically not by their creators, but by outside critical agents who force those works to advance something (i.e. a precise poetical tendency, a capitalist agenda). Tafuri sees operative criticism as deducing “its values from history itself” (deductive reasoning), and attempts “to force the future by introducing—on a critical level only—brand new values and *a priori* choices” (inductive reasoning).⁴⁷ By bracketing the words “—on a critical level only—” Tafuri stresses that the critic uses only language to authenticate a system of values, whereas the architect—when aligning with the critic—“confirms, by his activity, the range of applicability of that language” in what he builds or designs.⁴⁸ There is, then, in operative

⁴⁵ Tafuri, *Theories and History of Architecture*, 153.

⁴⁶ Tafuri, *Theories and History of Architecture*, 154.

⁴⁷ Tafuri, *Theories and History of Architecture*, 144.

⁴⁸ Tafuri, *Theories and History of Architecture*, 146.

criticism a degree of critic-architect interdependence. He also remarks that “about 90% of architectural writing is produced by architects who are active in the profession,” and asks,

Is not confronting a cultural situation of the *consumerist* type with a *consumer criticism* an operation too much *on the inside* to be really productive? Is not *operative criticism*, in this respect, too much compromised by the attitudes of planners to be able to bring out the non-obvious structures and the meanings implied in that very same planning?⁴⁹

But Tafuri cannot pass judgment on critics’ and historians’ use of operative criticism. He wrote as an operative critic himself, admittedly wanting to have an effect upon contemporary production.⁵⁰ He makes a great part of his work the measurement of the effects of others’ operative strategies on historical architectural production as well as on contemporary practice, noting how certain architectural protagonists have reread history and force past works to become operative by reading them as part of the story they want to tell.⁵¹ He gives Le Corbusier’s journal *L’Esprit Nouveau* as an example of how operative criticism flourishes “when an artistic revolution is establishing itself and needs the clarifying and divulging support of a deeply involved and committed historiography.”⁵²

This dimension of Tafuri’s use of the term “operative”—where he reads architecture as an “action” that is tied up with history and theory to justify it—significantly sheds light on his view of the relationship between architecture and the economic realm. It reveals, on my reading, that for Tafuri architecture and the economic realm are always complicit. It is just a question of which ideology is operating as the prime mover in one architectural development or another.

⁴⁹ Tafuri, *Theories and History of Architecture*, 155, 154.

⁵⁰ See for example Tafuri, *Theories and History of Architecture*, 143–144; Tafuri, *Architecture and Utopia*, x.

⁵¹ He notes the “didactic quality” and “historiographical contribution” of “Books like Giedion’s *Space, Time and Architecture*, or Zevi’s *History of Modern Architecture*,” as well as their status as “true architectural projects” (Tafuri, *Theories and History of Architecture*, 151). And he points out that literature such as Le Corbusier’s *L’Esprit Nouveau* “gives up an historiographical arrangement in order to bite into the present, accepting the risk of contradiction” (Tafuri, *Theories and History of Architecture*, 153).

⁵² Tafuri, *Theories and History of Architecture*, 148.

According to Tafuri the specific dimension of architecture is always to take action (to build), but always we find that a high degree of thought and action are joined as architecture and economic imperatives are complicit.⁵³ It is only our own ability to decipher the operative practices behind any development that can enable us to unravel the ideology at work in its specific coupling of architecture and economic forces for the project at hand.

Tafuri on Problems for Contemporary Criticism, Historians, and Practitioners. It is well known that a major strain of Tafuri's thought is connected to the idea of the death of the autonomy of architecture. This is particularly obvious when he writes at the end of *Architecture and Utopia*: "First among the intellectual illusions to be done away with is that which, by means of the image alone, tries to anticipate the conditions of an architecture 'for a liberated society.' ... It is useless to propose purely architectural alternatives."⁵⁴ On the facing page Tafuri places the plate of Aldo Rossi's *L'architecture assassinée* (hand-painted etching, 1975). But what does that really mean to architects? What is the essential problem Tafuri is referring to? And how does this affect his consideration of the relationship between architecture and the economic realm?

To begin, Tafuri sees that operative criticism—as the practice of investing history with a strong ideological charge—causes a problem for the critic, the historian, and the practitioner. He outlines the main problem as his belief that

history has a tendency to become ambiguous. Offering no certainties, history seems to offer itself as a mere collection of facts and things that wait to be given a meaning, in their turn, by each successive planning choice. It is not history, any more, that offers the architect a horizon of stability and values. It is, rather, architecture that, in its making, in its changing, in its attempt to recreate from nothing its own purpose and values, gives a constant metamorphosis of meanings to history. ... To the relative *availability* of architecture one adds the absolute availability of history.⁵⁵

⁵³ Tafuri, *Theories and History of Architecture*, 149.

⁵⁴ Tafuri, *Architecture and Utopia*, 179, 181.

⁵⁵ Tafuri, *Theories and History of Architecture*, 231.

On my reading, and this interpretation is also made separately by K. Michael Hays and Mary McLeod, Tafuri believes the task of the critical historian and the critical architect is to destroy the ineffectual myths that prop up conservative histories and that also give practicing architects false hopes for social transformation solely through design.⁵⁶

In effect, Tafuri insists that architects should focus on the political economic realm, because their practice is not at all isolated from it, despite the fact that history has shown that architectural attempts to alter the political economy have always ended up destroying the architecture—not destroying (or altering) the capitalist ideology, which may have been the goal. Hence it is only on that basis that “architecture’s death” is involved.

While there is a lot of negativity in his assertions (or at least the negativity has been foregrounded by most readers), he also writes positively that in this situation the practice of critical theory and architecture needs to find out how to reinsert past utopias into present reality.⁵⁷ He writes:

Those architects that are more aware find themselves in an ambiguous, contorted, almost ridiculous situation. If they ... follow their (rare) eversive impulses through to the end they are shocked at having to decree ... either the death of architecture or refuge in utopia. ... Since this anxiety and unease can only be partially justified through the specific analysis of architecture, and is linked to the embarrassment felt by the intellectual, impotent but conscious clown before the dynamic of capitalist development, criticism has a duty to increase the unease, to make precise and operative the “dissent” of the architect, to exasperate his objective situation. ... The critic must present ...

⁵⁶ By McLeod in the introduction to Ockman et al., eds., *Architecture, Criticism, Ideology*, 11. By Hays in *Architecture Theory since 1968*, 3.

⁵⁷ Tafuri, *Theories and History of Architecture*, 204–205.

the exact picture of an absurd but real situation, more and more stimulating conscious doubts, constructive dissent and general uneasiness.⁵⁸

But he is clear that this does not “reduce criticism to terrorist and nihilist activity.” Rather, the critical historian has to “unearth the intrinsic possibilities of the instruments employed by the architect” and “prepare the bases” “for a jump, a radical re-shuffle of the data ... and explain why it is not feasible today.”⁵⁹

The problems for the architect and historian, according to Tafuri, remain “the precise identification of those tasks which capitalist development has taken away from architecture, [and] in general from ideological prefiguration.” Since “ideology is useless to capitalist development,” he urges critics and historians to pass from the criticism of ideology to the problem of deciding what instruments of knowledge might be immediately useful to the political struggle.⁶⁰ He writes:

For those anxiously seeking an operative criticism, I can only respond with an invitation to transform themselves into analysts of some precisely defined economic sector, each with an eye fixed on bringing together capitalist development and the processes of reorganization and consolidation of the working class.⁶¹

⁵⁸ Tafuri, *Theories and History of Architecture*, 235, 236.

⁵⁹ Tafuri, *Theories and History of Architecture*, 236, 232, 233. See also p. 7, where he also alludes to this writing that critics have “the commitment of understanding the present,” and p. 8 where he writes that critics should “make historical the experiences of contemporary architecture.”

⁶⁰ Tafuri, *Architecture and Utopia*, ix, x.

⁶¹ Tafuri, *Architecture and Utopia*, xi. Also see p. 169 where he writes that ideology “is both historical and transient. To bring its specific characteristics to light, and evaluate its degree of usefulness with respect to the general aims proposed by the dominant forces in any given phase of development, is today the only contribution a criticism that is not purely descriptive can offer.” On p. 136 he also warns of criticism that is “incapable of analyzing the real causes of the crisis of design, [and] concentrates all its attention on the internal problems of design itself.” On p. 171 he warns of “the ever-present risk of intellectuals taking up missions and ideologies disposed of by capital in the course of their rationalization.” And in *Theories and History of Architecture*, 236, Tafuri writes that the only purpose with any historical sense is “...to find out what architecture is, as a discipline historically conditioned and institutionally functional to, first,

Now Tafuri recognizes that, in order to be political, architectural historians themselves indeed need to be tangled up with economic concerns and practice. He essentially condones an effective, entangled, “operative” practice when he writes that the historian is, at this point, faced with two choices:

A. Either to regain a specific role, concentrating his attention on his own autonomous instruments, renouncing the role that can be carried out much better by the new architectural disciplines placed somehow between criticism, the empirical science of planning methods and planning itself.

B. Or to shape his own studies as a specialist destined to have a role within an inter-disciplinary group formulating new architectural and urbanistic programmes.

But note that in both cases the result will be an operative criticism raised to a higher level, with all the attendant ambiguities.⁶²

In *Architecture and Utopia* Tafuri writes clearly that the link between architecture and the economy is problematic because “programs of great complexity,” “apparent in the area of building activity” and that presently structure the “reality” of “urban and regional” development, are complex only as a result of

the contradictions within the economic cycle as a whole. ... There exists the “partisan” analysis of such a reality, in which it is always necessary to recognize the hidden tendencies, the real objectives of contradictory strategies, and the interests connecting apparently independent economic areas. It seems to me that, for an architectural culture that would accept such a terrain of operations, there exists a task yet to be initiated. This task lies in putting the working class, as organized in its parties and unions, face to face

the ‘progress’ of the pre-capitalist bourgeoisie, and, later, to the new perspectives of capitalist ‘Zivilisation...’

⁶² Tafuri, *Theories and History of Architecture*, 162–163.

with the highest levels achieved by the dynamics of capitalist development, and relating particular moments to general designs.

But ... what we might define as the ideology of equilibrium ... of the Soviet five-year plans and ... of post-Keynesian economic theories ... is seen to be an unfeasible idol. ... Indeed the present efforts to make equilibriums work, to connect crisis and development, technological revolution and radical changes of the organic composition of capital, are simply impossible. To aim at the pacific equilibration of the city and its territory is not an alternative solution, but merely an anachronism.⁶³

I find that the clearest, simplest, most positively phrased question of possibilities Tafuri puts to contemporary practice regarding architecture and the economy is found in *Architecture and Utopia* when he writes:

The question to which an advanced level of programming must respond is, “What systems of values are generally coherent and guarantee the possibility of adaptation and therefore of survival?” ... The consequences of such phenomena, here barely touched upon, for the structure of planning and for the organization of designing, constitute a still completely open problem. It is, however, a problem which must be faced today and in regard to which didactic experimentation must take a position.⁶⁴

Viewed in this light, Tafuri was clear that the fate of capitalist society is not entirely extraneous to the problems critics, historians, and practitioners face.

III. Concerns of Jameson

Architects, historians, and critics interested in how architectural practice relates to the political economy have generally had to consider the long shadow cast by Tafuri’s historiography. In the

⁶³ Tafuri, *Architecture and Utopia*, 172–173.

⁶⁴ Tafuri, *Architecture and Utopia*, 175–176.

late 1970s and early 1980s, some architects and critical historians in the Institute for Architecture and Urban Studies in New York and in the reading group that would later constitute Revisions (this group includes Joan Ockman, Mary McLeod, and Beatriz Colomina) went so far as to invite the literary critic and historian Fredric Jameson to present his thoughts on Tafuri's position. They specifically requested Jameson to write a consideration of both architectural production under capitalism and Tafuri's theoretical work in connection with Jameson's own emerging principles of postmodernism. Jameson, who was then beginning to focus on questions of ideology and politics in several modes of cultural production other than literature, such as in architecture and the arts, presented the essay "Architecture and the Critique of Ideology" at the Institute for Architecture and Urban Studies in 1982. The group receiving his essay later published and commented on it, as well as on Tafuri, in their 1985 volume *Architecture, Criticism, Ideology*.⁶⁵

Jameson on Tafuri and the Political Economy in "Architecture and the Critique of Ideology." One of the reasons I extensively reconstructed Tafuri's concerns about the relationship between architecture and the economy is because in "Architecture and the Critique of Ideology" Jameson re-presents them, comments on them, and develops his own further reasoning regarding the possibilities for architecture under capitalism. I have not read a single refutation of Jameson's summary of Tafuri's position, in particular not from the group of architectural historians who solicited Jameson's essay.⁶⁶

In "Architecture and the Critique of Ideology" Jameson essentially has three aims: (A) to summarize Tafuri's views; (B) to demonstrate that Tafuri's *Architecture and Utopia* is part of a tradition of dialectical historiographic writing on the arts in general, and to critique that tradition; and (C) to demonstrably go beyond what he sees as the restrictive binary structure of dialectical history writing (what Jameson also refers to as the examination of Tafuri's work in the Marxist

⁶⁵ The reading group Revisions also published the collection of essays *Architectureproduction*, ed Beatriz Colomina and Joan Ockman (New York: Princeton Architectural Press, 1988).

⁶⁶ In her introduction to *Architecture, Criticism, Ideology*, and in her "Architecture and Politics in the Reagan Era" Mary McLeod does not contest Jameson's views on or readings of Tafuri.

context).⁶⁷ This means to critique Tafuri's work from the new position of the so-called postmodern context. Here Jameson develops what he calls the Lefebvre-inspired idea that the conception and control of space is "the fundamental category of politics and of the dialectic itself"; and he sketches but does not fully develop the artistic technique he calls a "Gramscian alternative" or "enclave theory."⁶⁸ Below I review these aims, and the extent to which Jameson follows through on each of them.

(A). Jameson isolates what he calls the "key elements" of "Tafuri's working judgments—in texts written over a number of years" in his following five-point summary of Tafuri's views:

(1) The architectural critic has no business being an "ideologist," that is, a visionary proponent of architectural styles of the future, "revolutionary" architecture, and the like; her role must be resolutely negative, the vigilant denunciation of existent or historical architectural ideologies.⁶⁹ (2) The practicing architect, in *this* society and within the closure of capitalism as a system, cannot hope to devise a radically different, a revolutionary, or a "Utopian" architecture of space either. (3) Without any conceivable normative conception of architectural space, of a space of radical difference from this one, the criticism of buildings tends to be conflated with the criticism of the ideologies of such buildings; the history and criticism of architecture thus tends to fold back into the history and criticism of the various ideologies of architecture, the manifestos and the verbal expressions of the great architects themselves. (4) Political action is not renounced in

⁶⁷ Fredric Jameson, "Architecture and the Critique of Ideology," in Hays, ed., *Architecture Theory since 1968*, 444. Paper originally presented in 1982 to the reading group Revisions, and published in *Architecture, Criticism, Ideology*.

⁶⁸ Jameson, "Architecture and the Critique of Ideology," 443, 454.

⁶⁹ According to Jameson, Tafuri "explicitly repudiates" any role for the critic as an inspiration to practitioners, or to accomplish what Jameson refers to as the inspirational combination of structuralism with the phenomenological "problematic," in order to go "beyond these two moments" (Jameson, "Architecture and the Critique of Ideology," 443). "Tafuri's 'pessimism' is thus to be seen as a formal necessity of the generic structure of his text—dialectical historiography—rather than as an 'opinion' or a 'position' in its own right" ("Architecture and the Critique of Ideology," 445).

such a position, or not *necessarily* (although more “pessimistic” readings of Tafuri are certainly possible). What is, however, affirmed here is consonant with the Althusserian tradition of the “semi-autonomy” of the levels and practices of social life: politics is radically disjoined from aesthetic (in this case architectural) practice. The former is still possible, but only on its level, and architectural or aesthetic production can never be immediately political; it takes place somewhere else. Architects can therefore be political, like other individuals, but their architecture today cannot be political (a restatement of proposition 2, above). It follows, then, that: (5) An architecture of the future will be concretely and practically possible only when the future has arrived, that is to say, after a total social revolution, a systematic transformation of this mode of production into something else.⁷⁰

Jameson asserts that this position flows from Tafuri’s belief that “a socialist revolution and a socialist society are not possible until capitalism has somehow exhausted all its possibilities.” Since “socialist revolution is here by definition global revolution or it is nothing,” Jameson asserts as Tafuri’s perspective that “there can be no qualitative change in any element of the older capitalist system—as, for instance, in architecture or urbanism—without beforehand a total revolutionary and systematic transformation.”⁷¹ On this point Jameson writes “the cardinal sin” of Tafuri’s critique of modernism “is precisely to identify (or conflate) the political and the aesthetic, and to foresee a political and a social transformation that is henceforth at one with the formal processes of architectural production itself.”⁷²

Are those five points an accurate reflection of Tafuri’s position? I would only contest point (1), Jameson’s assertion that Tafuri’s position is that “the architectural critic has no business being an ‘ideologist,’ that is, a visionary proponent of architectural styles of the future, ‘revolutionary’

⁷⁰ Jameson, “Architecture and the Critique of Ideology,” 444. According to Jameson, those five key features of Tafuri’s thought “betray some kinship with T. W. Adorno’s late and desperate concept of a purely “negative dialectic.”

⁷¹ Jameson, “Architecture and the Critique of Ideology,” 452.

⁷² Jameson, “Architecture and the Critique of Ideology,” 454, 444.

architecture and the like.” It appears odd that Jameson is compelled to have to point out that “Tafuri’s position is *also* an ideology, and one that does not get out of ideology by committing one’s self to ... negative and critical ‘ideological analysis.’”⁷³ This indicates to me that Jameson reads what he calls Tafuri’s “rigorous and self-conscious stoicism”⁷⁴ as an invitation for the critic and the architect to be neither ideological nor operative, and to “do nothing” in the present. Nothing could be farther from Tafuri’s stated intentions.

It is true that in *Architecture and Utopia* Tafuri writes: “First among the intellectual illusions to be done away with is that which, by means of the image alone, tries to anticipate the conditions of an architecture ‘for a liberated society.’ ... It is useless to propose purely architectural alternatives.”⁷⁵ But we have already looked at Tafuri condoning an effective, entangled, “operative” practice in *Theories and History of Architecture* when he writes that the historian is faced with the choice to either concentrate his attention on his own autonomous instruments, or to join an inter-disciplinary group that might formulate new architectural and urban programs.⁷⁶ In other words, Jameson has overlooked those places where most clearly Tafuri writes that the historian is indeed an ideologue, such as when Tafuri writes historians “must precisely ‘place’ the problems debated at present, recognize their ambiguity, values and mystifications, offer the architect an endless vista of new and unsolved problems, available for conscious choice and freed from the weight of myth.”⁷⁷

(B). Jameson’s demonstration that Tafuri’s *Architecture and Utopia* can be considered part of a tradition of dialectical historiographic writing in the arts is very insightful and informative.⁷⁸ Jameson cleverly identifies the book’s relation to two other dialectical histories, each on a different aesthetic discipline, and asserts that all three are “of comparable intensity and

⁷³ Jameson, “Architecture and the Critique of Ideology,” 444.

⁷⁴ Jameson, “Architecture and the Critique of Ideology,” 461.

⁷⁵ Tafuri, *Architecture and Utopia*, 179, 181.

⁷⁶ Tafuri, *Theories and History of Architecture*, 162.

⁷⁷ Tafuri, *Theories and History of Architecture*, 229.

⁷⁸ Jameson, “Architecture and the Critique of Ideology,” 444. Jameson refers to “the discursive form in which Tafuri works, namely historiography itself, and most particularly narrative history, whose formal dilemmas and problems today may be seen as determining (or at least overdetermining) certain of Tafuri’s organizing concepts.”

intellectual energy.” He compares Tafuri’s operations in *Architecture and Utopia* (on architecture) with the operations of Barthes in *Writing Degree Zero* (on literature), and Adorno in *Philosophy of Modern Music* (on music). According to Jameson, these three embody “the practice of a peculiar, condensed, allusive discursive form, a kind of textual *genre*, still exceedingly rare, which I will call dialectical history.” Each manages not just to produce a representation of history, but “‘produces the concept’ of a dialectical history” of its craft.⁷⁹ Each, Jameson claims, is a totalizing historiography, where inevitably the operations of its author undermine the very foundations of the craft being looked at by describing there a current situation for producers, in need of a solution to go beyond some current ideological stalemate.⁸⁰

According to Jameson, Adorno’s, Barthes’s, and Tafuri’s “ability to interpret a given work of art as a provisional ‘solution’ is absolutely dependent on a perspective that reads the artwork against a context reconstructed or rewritten as a situation and a contradiction.” Jameson identifies the respective situations in need of solutions: Adorno’s discussion of musical history culminates in Schoenberg’s “solution” of the twelve tone system; Barthes’s *Writing Degree Zero* culminates in the well-known idea of “white writing” as an equally impossible solution to a dilemma; and in Tafuri it is the “asphyxiating sense of the futility of any kind of architectural or urbanistic innovation on this side of that equally inconceivable watershed, a total social revolution.”⁸¹

With great insight Jameson writes that the “materialist or dialectical historiography” ultimately undermines “the specialized disciplines themselves—by unexpectedly demonstrating the existence ... of an *Other* of the discipline, an outside, a limit, the revelation of the *extrinsic*,

⁷⁹ Jameson, “Architecture and the Critique of Ideology,” 445–446. According to Jameson, Althusser’s “solution” to the dialectical dilemma is for historians to conceive their “task not as that of producing a representation of history, but rather as that of producing the *concept* of history.” Regarding which Jameson continues: “But how is this to be done? ... *Architecture and Utopia* ... ‘produces the concept’ of a dialectical history of architecture” (“Architecture and the Critique of Ideology,” 445).

⁸⁰ Jameson, “Architecture and the Critique of Ideology,” 448.

⁸¹ Jameson, “Architecture and the Critique of Ideology,” 446, 458. Interestingly, Jameson also draws a comparison between Schoenberg’s twelve-tone system and Le Corbusier’s urbanism, asserting that both strive toward a sort of “‘unified field theory’ of the macro and the micro.”

which it is believed to be scandalous and unscholarly to introduce” but which in fact turns out to be central to it.⁸² Jameson identifies architecture’s “*Other*,” for Tafuri, as the economy:

Coeval with History and society itself, ... the outer limit of ... the architectural vocation as including urbanism and city planning is the economic itself, or capitalism in the most overt and naked expression of its implacable power. So the great Central European urbanistic projects of the 1920s (the *Siedlungen*, or workers’ housing in Berlin, Frankfurt, and Vienna) touch their Other in the seemingly “extrinsic” obstacle of financial speculation and the rise in land and property values that causes their absolute failure and spells an end to their Utopian vocation. ... In Tafuri’s practice of the dialectic, this seemingly extrinsic situation ... passes an absolute judgment of History proper upon such Utopian forms.⁸³

⁸² Jameson, “Architecture and the Critique of Ideology,” 448.

⁸³ Jameson, “Architecture and the Critique of Ideology,” 449. It should not be missed that Jameson also asserts Tafuri’s form of history writing, dialectical history, is essentially that of “storytelling”, is essentially “interchangeable” with “the realistic novel” and “tends to suggest that history is something that you can see, be a witness to, be present at—an obviously inadmissible proposition.” Yet Jameson fully hedges this critique in also stating that “On the other hand ... history is always fundamentally storytelling, must always be narrative in its very structure,” and that “the dialectic has always for better or worse been associated with some form or other of historical vision.” (Jameson, “Architecture and the Critique of Ideology,” 445.) According to Jameson, Tafuri’s schematization of modernist history illustrated that the modernist proposals for the city, in their Utopian form, effectively “prove to be an instrument in the edification of a business system and the new dynamism of capital,” unwittingly “prepar[ing] the terrain for the omnipotence of the fully ‘rationalized’ technocratic plan, for the universal planification of what was to become the total system of multinational capital. ... Whatever avant-garde ... Utopias thought they were intent on achieving, ... in their effective practice, those ends are dialectically reversed and serve essentially to reinforce technocratic total control of the new system of the bureaucratic society of planned consumption.” (Jameson, “Architecture and the Critique of Ideology,” 457.) “In all three [modes of dialectical history practiced by Tafuri], the present is ultimately projected as the final and most absolute contradiction, the ‘situation’ that has become a blank wall, beyond which History cannot pass. Such an ‘end of history,’ or abolition of the future, is most obvious in Adorno, where it is paid for by the tragic ‘blind spot’ of the philosopher-composer, who must on the one hand systematically reject the ‘other’ of his culture (including the movement of popular or mass culture—contemptuously dismissed by Adorno under the all-purpose term ‘jazz’ or ‘easy music,’ and that whole movement of Third World history and culture, which is the ‘repressed’ of his Eurocentrism); at the same time he must refuse even the development of advanced music beyond his ‘final stage,’ repudiating

Jameson is among those who read more pessimism than optimism in Tafuri's recognition that architecture is subsumed by the economy. According to Jameson, any reader must be oppressed by the sense that the fundamental organizational feature of Tafuri's confrontation of architecture and the economic realm is the sense of necessary failure, of closure, of ultimate unresolvable contradictions, and the impossibility of the future.⁸⁴

But on my reading, much of the negativity that Jameson is pointing out in Tafuri is an expression of his own, unique assumption of a leadership role for the critic vis-à-vis artists. In other words, Jameson assumes "readers who as practicing artists ... come to them for suggestions and encouragement as to the possibility of future cultural production."⁸⁵

At his most abstract intellectual level, Jameson asserts that Tafuri's "anti-idealistic thrust" threatens and undermines his own notion of "idealism." He calls this "the overthrow of idealism by materialism ... at work in such books."⁸⁶ This is a matter of great importance to him in "Architecture and the Critique of Ideology," for later he champions the idea that there is a great need for small pockets of idealistic thought to exist, due to the real-world dominance of multinational capitalism. Jameson understands Tafuri's texts to be nonidealistic just because they are quite materialist in their modes of analysis, and critical of so much other ideology—yet nowhere does Tafuri deny that he propagates a useable ideology himself.⁸⁷ To read Tafuri as exceedingly materialist and nonidealist, Jameson cites Marx and Engels's sense of historical materialism and their insistence on the so-called "social determination" of consciousness, as expressed in *The German Ideology*. It is worthwhile to read the passage Jameson cites, because I question his interpretation of it:

Stockhausen, electronic music, all the developments of the 1950s and 1960s, with the same stubborn passion that leads him to bracket any conceivable *political* future in *Negative Dialectics*." (Jameson, "Architecture and the Critique of Ideology," 449–450.)

⁸⁴ Jameson, "Architecture and the Critique of Ideology," 446.

⁸⁵ Jameson, "Architecture and the Critique of Ideology," 446.

⁸⁶ Jameson, "Architecture and the Critique of Ideology," 447.

⁸⁷ As is generally accepted, the three authors ideologically fit within the tradition of Marxist aesthetic theory.

We do not set out from what people say, imagine or conceive, nor from people as narrated, thought of, imagined, conceived, in order to arrive at people in the flesh. We set out from real, active human beings, and on the basis of their real life-process. ... The phantoms formed in the human brain are also, necessarily, sublimates of their material life-process, which is empirically verifiable and bound to material premises. Morality, religion, metaphysics, all the rest of ideology and their corresponding forms of consciousness, thus no longer retain their semblance of independence. They have no history, no development, in their own right; but it is rather human beings who, developing their material production and relationships, alter, along with their real existence, their thinking and the products of their thinking. Life is not determined by consciousness, but consciousness by life.⁸⁸

Jameson's effort to point out the negativity of Tafuri as a dialectical historiographer relies on his misunderstanding of the passage above. Marx and Engels propose neither that "materialism overthrows idealism" nor that ideologies are nonexistent, not needed, or dead. Marx and Engels noted that the material conditions of life establish the things we think about.⁸⁹ The fact is that our existing material premises more easily generate effective justifying ideologies in our minds than

⁸⁸ Jameson, "Architecture and the Critique of Ideology," 447, quoting from Karl Marx and Friedrich Engels, *The German Ideology*, ed. R. Pascal (New York: International Publishers, 1947).

⁸⁹ I make this observation with intellectual support; Althusser, for example, notes that Engels and Marx, and specifically in *The German Ideology*, do not mean that ideology is dead. Althusser notes that ideology has a history (a long line of examples of it can be cited), even though it is true that it can spring up, so to speak, ahistorically, based on myths fabricated by a ruling class or region. Therefore Althusser notes ideology is "eternal" in the sense that it will always be around, and used, to justify subject positions in social formations, to justify "the system of the ideas and representations which dominate the mind of a man or a social group." The fact that the day-to-day dominance of consumer capitalism pushes that ideology that justifies it far back from the surface of our everyday consumption activities makes it seem, to Jameson, that postmodern or multinational capitalism operates without any need for what he refers to as some traditional sense of a structured ideology. Again Althusser is clear on why things appear without structured ideology while ideology remains powerful and strongly employed. See Louis Althusser, "Ideology and Ideological State Apparatuses," in *Lenin and Philosophy, and Other Essays* (New York: Monthly Review Press, 1971), 158–170.

do nonexistent ones. (This is why it could be said that the dominant material relations don't need ideology, because they are already dominant and exist—while any alternative ideology can be said to be dead, because, not being the ideology currently in place in the lived world, it appears to be nonexistent.) An existing political economy, for example, can contain a way of thinking favorably about it—its ideology—that justifies it. This is not negative. Marx and Engels expose this just to lay ideology bare, to demystify it, to connect it to everyday life and its relations. This enables the reader to see ideology's construction (its constructedness), and to see that what is required (of the revolutionary or the conservative) is to know how to construct ideologies. It remains possible to conceive of an ideology that opposes the dominant, material way we relate in a given political economy. It follows that to work to create the material conditions in which we want to live—opposite those we may live under—remains idealism, in practice. Thus in idealistically (ideologically) pushing for a revolution in real-world relations, the advantage goes to a mode of material relations when it comes to exist and to benefit from the ideology-constructing tendency of existence. This tends also to self-propel existing material conditions.

Jameson's reading is that Tafuri's dialectical history (like the Marx and Engels he cites in *The German Ideology*) leads us into a box canyon, where we are surrounded by towering “natural” walls—actually products of the author's own thinking—a terrain with no avenue of escape as it is impossible to trace our steps backward (back into history). It is fitting that, in what follows in “Architecture and the Critique of Ideology,” Jameson endorses a Gramscian, prison-inspired, alternative to this intellectual box canyon.

But is Tafuri's dialectical history (and the Marx and Engels in *The German Ideology*) truly so negative? On my reading it is not. Tafuri has simply defined and refined the dilemmas for revolutionary thought in architecture so much so that the easy answers and the failed concepts are simply not acceptable anymore.⁹⁰ It is Jameson who misunderstands the fact that Tafuri is repeatedly critical (of the dominant ideology, of failed attempts to alter it), because he favors an

⁹⁰ In “Architecture and the Critique of Ideology,” 460, Jameson points out he finds “annoying and scandalous” the habit of dialectical thought to discredit “seemingly opposed positions on the grounds that both ... represent the two intolerable options of a single double-bind.”

interpretation in which Tafuri sees only the “impossibility of the future” overthrow of dominant ideologies.

(C.) Therefore it becomes Jameson’s aim in “Architecture and the Critique of Ideology” to idealistically enlarge the concept of the political⁹¹ by developing the Lefebvre-inspired “conception of ‘space’ as the fundamental category of politics and of the dialectic itself.”⁹² He does this not by extensively citing Henri Lefebvre, but in the arguments that consume most of his pages; namely his demonstration that we are in a period called postmodernism, a periodization (and a totalizing periodization of all spheres of life—social, political, economic, cultural, international relations, etc.) for which he postulates the relevance of an artistic technique he calls a “Gramscian alternative” or “enclave theory” as a way to develop Lefebvre’s “great prophetic vision ... yet ... to be explored and implemented.”⁹³ For Jameson, when cultural producers develop prophetic or anticipatory concepts (this predictive terminology will be explained below), they create or carve out “spaces” (built or not) whose very conceptions exist as politically alternative enclave-like “places” and challenge, in some way, the material world and its continued domination by the political economy of multinational capitalism.

Jameson’s concern that dialectical histories (e.g. Tafuri’s) threaten and undermine his notion of idealism is a matter of great importance to him. As he clearly aims to get out of what he saw as the restrictive structure of dialectical history writing, this for Jameson becomes the same as critiquing Tafuri from the “new” position of the so-called postmodern context. Where Jameson refers to his aim as “the examination of Tafuri’s work in the Marxist context,” this also becomes the same as his argument that a Gramscian alternative or enclave theory is the direction that Marxist thought ought to take, with a particularly strong focus on his claim that “today”—the

⁹¹ It should be noted that in “Architecture and the Critique of Ideology,” 454, Jameson writes that “Le Corbusier’s seemingly apolitical stance architecture or revolution can be read as an *enlargement* of the very conception of the political,” and that Le Corbusier “saw the construction and the constitution of new space as the most revolutionary act.” I have cited where Tafuri reads the same in Le Corbusier, but also gave reasons why his urbanism failed, or was “a dead letter,” reasons already fully summarized earlier in this dissertation.

⁹² Jameson, “Architecture and the Critique of Ideology,” 443.

⁹³ Jameson, “Architecture and the Critique of Ideology,” 444, 443.

postmodern period—is different even from the time in which Tafuri wrote.⁹⁴ As an artistic technique particularly suited for the postmodern period, “‘counterhegemony’ means producing and keeping alive a certain alternate ‘idea’ of space.”⁹⁵ It needs to be noted that he is here accepting the perspective that we are currently in an historical situation we need to get out of via renewed aesthetic theory. This is a perspective he had attributed as a liability to the dialectical historiographers (Tafuri, Barthes, and Adorno), but he nonetheless adopts it in calling for his new “Gramscian alternative.”

On my reading, Jameson tries to demonstrate that Tafuri built sound theory but was stuck, so to speak, at his chronological position, sparing Jameson the need to criticize him intellectually. Beyond Tafuri’s place in time, Jameson (elevating himself) can insert both his periodization of the concept of postmodernism and of an enclave theory to “go beyond” Tafuri both as a Marxist and as an aesthetic theorist more useful (I have just cited his emphasis of the usefulness of the critic) to practitioners around him.⁹⁶ This going-beyond is justified almost exclusively on grounds of periodization, with Jameson’s thought allowed to have more vision since it comes after Tafuri, already eclipsed by the natural movement of history and time.

To argue the need for a third term, the new, to break the deadlock he sees between the binaries in any dialectic modes of analysis, particularly as set up by Tafuri’s dialectical historiography, Jameson goes back several decades into theory’s past to assert, with his own synthetic reasoning, that there is some need to “combine” what he calls the phenomenological “problematic” with structuralism, in order to go beyond them:

⁹⁴ Jameson examines Tafuri’s work in the context of a “vaster contemporary ... critique of high modernism,” with its “sense that we may therefore now be in something else, sometimes called postmodernism.” According to Jameson, it is extremely significant that “the drawing of some new postmodernist moment or even ‘age’ is utterly alien to Tafuri himself and plays no role in his periodizing framework or in his historical narrative.” (“Architecture and the Critique of Ideology,” 445.) I disagree.

⁹⁵ Jameson, “Architecture and the Critique of Ideology,” 454.

⁹⁶ In “Architecture and the Critique of Ideology,” 446, Jameson makes the observation that the fact that Tafuri wrote dialectically is a key indication that Tafuri’s efforts are “inseparable from some ultimate historical perspective of reconciliation, of achieved socialism, of the ‘end of prehistory’ in Marx’s sense.”

What is loosely called “structuralism” is now generally understood as the repudiation of [the] phenomenological “problematic,” of such presuppositions as “experience”; it has generated a whole new counter-problematic of its own, in which space—the individual building or the city itself—is taken as a text in which a whole range of “signs” and “codes” are combined.⁹⁷

According to Jameson, within structuralism there is another problem: the cultural techniques of subversion, of the breaking of codes, soon lose their therapeutic and destructive shock value and suffer abuse from “their predictable dialectical opposite, the notion of ‘cooptation.’” According to Jameson, the effectiveness of the subversive or ironic cultural act “is today generally in doubt: they now are taken to be more Utopianism, only of a negative or ‘critical’ variety.” In Pierre Bourdieu’s concept of “practice,” however, he sees the right combination: (1) the study of the social body’s programming (of the more or less phenomenological “experience”) along with (2) the study of its deformation by the social relations (structuralism’s “signs” and “codes”) in which it is implanted.⁹⁸

Regarding Postmodernism. At this point in “Architecture and the Critique of Ideology” Jameson defends his periodization distinguishing postmodernism from modernism. He considers what possibility there is “of a new periodization on the level of culture,” of a “new type of culture or cultural dynamic” that should correspond to the current, postmodern moment, or phase, of capitalism.⁹⁹ On my reading, Jameson at this point is not so much writing about Tafuri as he is fencing off territory as his period of inquiry (the postmodern) and beginning to insist as to how it differs from previous periods. Tafuri, then, is dragged in only at times, and only to be killed off, so to speak, intellectually muscled out of having full relevance or applicability to the current period, which is Jameson’s to analyze and in which to be the leading ideologue.¹⁰⁰ For example,

⁹⁷ Jameson, “Architecture and the Critique of Ideology,” 442.

⁹⁸ Jameson, “Architecture and the Critique of Ideology,” 443.

⁹⁹ Jameson, “Architecture and the Critique of Ideology,” 455.

¹⁰⁰ For example, despite the fact that Tafuri’s *Architecture and Utopia* (as Jameson writes) is a “version of the ‘end of ideology’ roughly consistent with the periodizations of some new stage of capital,” Jameson asserts that “Tafuri refuses this periodization and we will observe him

as we will see Jameson asserts that any viable critical or negative dialectical value of art may now be an “older notion,” once valid in the modernist period, but no longer appropriate or operative in the postmodern.¹⁰¹

According to Jameson we can begin to schematize a shift from a modern to postmodern as we recognize that post–World War II conditions reflected the primacy of technocrats “as a new social group” and “the primacy of science.” (He acknowledges he is drawing heavily on Ernest Mandel’s work of the late 1970s for this schematization, as had Tafuri, but it is essential to point out that Jameson does not acknowledge here an awareness that Tafuri was also drawing upon Mandel.) At this point Jameson also makes mention of the principles of economic management credited to John Maynard Keynes, because Keynesianism is noted by Tafuri as an important modern concept, introduced in the 1930s to manage the crises in capitalism, also known as business cycles.

As a strategy to manage the contradictions of capitalism, Jameson characterizes Keynesianism as exceedingly superstructural, explicit, and formal. He claims superstructural, explicit, or formal approaches are not suited for a postmodern period (they are modern), and he claims, rather outlandishly, that we should see Keynesianism simply “disappear” (at some unspecified time) and no longer be practiced as part of any principles applied to the management of a capitalist economy.¹⁰² Jameson clearly conflates Keynesianism with Tafuri to snuff out both, because he

positioning his critique of the ‘postmodernist’ beneath the general category of a still high modernist Utopianism, of which they are seen merely as so many epigones” (Jameson, “Architecture and the Critique of Ideology,” 456).

¹⁰¹ In “Architecture and the Critique of Ideology,” 455–456.

¹⁰² Jameson, “Architecture and the Critique of Ideology,” 457. Jameson’s claim that Keynesian principles “should disappear” goes well past any acceptable economic assumptions, in his goal to extinguish theories from the period called modern so he can claim that a new period is upon us. To claim that Keynesian principles have disappeared would be very hard to substantiate. See for example the stated functions of the U.S. Federal Reserve in the Reserve Board’s *Federal Open Market Committee Monetary Policymaking* statement found at: <http://www.federalreserve.gov/fomc>, which states:

The Federal Reserve Act of 1913 gave the Federal Reserve responsibility for setting monetary policy. The term monetary policy refers to the actions undertaken by a central

bank, such as the Federal Reserve, to influence the availability and cost of money and credit to help promote national economic goals.

The Federal Reserve continues to control the three tools of monetary policy—open market operations, the discount rate, and reserve requirements. The Board of Governors of the Federal Reserve System is responsible for the discount rate and reserve requirements, and its Federal Open Market Committee (FOMC) is responsible for open market operations. Using the three tools, the Federal Reserve influences the demand for, and supply of, balances that depository institutions hold at Federal Reserve Banks and in this way alters the federal funds rate. The federal funds rate is the interest rate at which depository institutions lend balances at the Federal Reserve to other depository institutions overnight. Changes in the federal funds rate trigger a chain of events that affect other short-term interest rates, foreign exchange rates, long-term interest rates, the amount of money and credit, and, ultimately, a range of economic variables, including employment, output, and prices of goods and services.

The FOMC consists of twelve members—the seven members of the Board of Governors of the Federal Reserve System; the president of the Federal Reserve Bank of New York; and four of the remaining eleven Reserve Bank presidents, who serve one-year terms on a rotating basis. The rotating seats are filled from the following four groups of Banks, one Bank president from each group: Boston, Philadelphia, and Richmond; Cleveland and Chicago; Atlanta, St. Louis, and Dallas; and Minneapolis, Kansas City, and San Francisco. Nonvoting Reserve Bank presidents attend the meetings of the Committee, participate in the discussions, and contribute to the Committee's assessment of the economy and policy options. The FOMC holds eight regularly scheduled meetings per year. At these meetings, the Committee reviews economic and financial conditions, determines the appropriate stance of monetary policy, and assesses the risks to its long-run goals of price stability and sustainable economic growth.

See also specifically the evidence of the sustained development of Keynesianism deep into multinational capitalist economic planning, evident in Minutes of the Meeting of the Federal Open Market Committee December 21, 1999, at: <http://www.federalreserve.gov/fomc/transcripts/>. On pp. 9–10 of the transcript, a presentation by economist Mike Prell clearly evidences the sustained development of Keynesianism deep into multinational capitalist economic planning:

MR. PRELL: I think it's worth sounding a note of caution that strong productivity gains and intense competition—even accelerating productivity and intensifying competition—do not by themselves ensure that there can be no step-up in inflation. Unless supply is completely elastic, which seems unlikely in the short run, demand can become excessive.

That, we fear, is the current situation, with the rising stock market overriding the effects of monetary tightening. Once again in recent weeks, the market has defied our notions of valuation gravity by posting an appreciable further advance. Moreover, it has done so in a way that seems to highlight the risk that it will continue doing so. I refer to the incredible run-up in “tech” and e-commerce stocks, some of which have entered the big-cap realm without ever earning a buck.

needs to separate Tafuri (and modernism) from theorists who appreciate his understanding of postmodernism (and postmodern aesthetic work). So according to Jameson “both these ultimate

To illustrate the speculative character of the market, let me cite an excerpt from a recent IPO prospectus: “We incurred losses of \$14.5 million in fiscal 1999 primarily due to expansion of our operations, and we had an accumulated deficit of \$15.0 million as of July 31, 1999. We expect to continue to incur significant...expenses, particularly as a result of expanding our direct sales force.... We do not expect to generate sufficient revenues to achieve profitability and, therefore, we expect to continue to incur net losses for at least the foreseeable future. If we do achieve profitability, we may not be able to sustain it.” Based on these prospects, the VA Linux IPO recorded a first-day price gain of about 700 percent and has a market cap of roughly \$9 billion. Not bad for a company that some analysts say has no hold on any significant technology.

The warning language I’ve just read is at least an improvement in disclosure compared to the classic prospectus of the South Sea Bubble era, in which someone offered shares in “A company for carrying on an undertaking of great advantage, but nobody to know what it is.” But, I wonder whether the spirit of the times isn’t becoming similar to that of the earlier period. Among other things, it may be noteworthy that the tech stocks have done so well of late in the face of rising interest rates. Earlier this year, those stocks supposedly were damaged when rates rose, because, people said, quite logically, that the present values of their distant earnings were greatly affected by the rising discount factor. At this point, those same people are abandoning all efforts at fundamental analysis and talking about momentum as the only thing that matters.

If this speculation were occurring on a scale that wasn’t lifting the overall market, it might be of concern only for the distortions in resource allocation it might be causing. But it has in fact been giving rise to significant gains in household wealth and thereby contributing to the rapid growth of consumer demand—something reflected in the internal and external saving imbalances that are much discussed in some circles. Whether our assumed 75 basis point increase in the fed funds rate would be a sufficient shock to halt this financial locomotive is open to question.

For the viewpoint of an independent financial analyst that the Federal Reserve Board under the Chairmanship of Alan Greenspan should do even more to control the economy (particularly in boom periods), i.e. should assert more Keynesian interventionism, see the financial market writing of Bill Fleckenstein in his *Contrarian Chronicles* column, specifically: “The Mania Chronicles,” Chapter 3 of the “Archives” section at: www.fleckensteincapital.com (column available via web subscription only).

Although Jameson’s *Postmodernism* more exhaustively treats the questions of cultural production’s relation to the economy than does the essay “Architecture and the Critique of Ideology,” he makes no indexed reference to Keynes or Keynesianism in the entire book. See *Postmodernism*, 432–433. Neither does Jameson’s section focused solely on economics (Chapter 8) offer any historical account whereby market interventionism is defeated or disappears. Rather he reviews the dominance of free market economies since the cold war over failed socialisms. This is not, again, a description of the changing volume of regulation or control exercised over capitalist—now multinational capitalist—markets that would substantiate his claim Keynesianism “should disappear.”

middle-class ideologies or Utopias—Keynesianism *and* high modernism—should disappear together.”¹⁰³

Jameson states that in the postmodern phase the ideological logic supporting capitalism is below the surface, relying not on explicit formal strategies but on the mere fact that

ideas as such—ideology in the more formal sense of a whole system of legitimizing beliefs—are no longer significant elements in the social reproduction of late capitalism. ... The commodity is its own ideology: the practices of consumption and consumerism ... are enough to reproduce and legitimate the system, no matter what “ideology” you happen to be committed to. In that case, not abstract ideas, beliefs, ideologies, or philosophical systems, but rather the immanent practices of daily life now occupy the functional position of “ideology.”¹⁰⁴

This self-justifying tendency of the dominant system is also obvious to Tafuri, who was also aware in his writing that with a postmodern economy and its post-Keynesian economic management techniques, the market is realized strictly in terms of the logic of its own mechanisms, without any extrinsic justifications, and is absolutely independent of any ethical ends or teleology.¹⁰⁵ Since both Jameson and Tafuri cite Mandel’s late 1970s schematization of capitalism as an influence, and since I find that neither Jameson nor Tafuri acknowledge the

¹⁰³ Jameson, “Architecture and the Critique of Ideology,” 457.

¹⁰⁴ Jameson, “Architecture and the Critique of Ideology,” 456. On my reading, this last is like claiming that the entire ideology of Roman Catholicism (promotion of large families through ideologically banning birth control, salvation not in this world but the next, altruism and disregard for personal gain in this world, etc.) is now replaced by the immanent daily practices of Catholicism (i.e. the rituals of Sunday mass and prayer, receiving the sacraments, and tithing one’s income for redistribution/maintenance of the church).

Having read Althusser’s “Ideology and Ideological State Apparatuses,” it is clear to me that Jameson is able to take the position that “formal” ideologies have “disappeared” due primarily to his misunderstanding of the passage of Marx and Engels he cites from *The German Ideology*. Also, Jameson’s position that “formal” ideologies have “disappeared” can be reduced to, on my view, a recognition that an existing mode of socioeconomic relations is very easily justified ideologically simply by being the existing mode.

¹⁰⁵ Tafuri, *Architecture and Utopia*, 61.

other's use of Mandel, only Mandel should reasonably be credited with originating such observations of the self-justifying tendencies of multinational capitalism (that credit subject to revision from back research on Mandel's influences, beyond the scope of this dissertation). As a result, Jameson's claim is invalid that Keynesianism, high modernist practices, and Tafuri's analysis are not relevant in a postmodern period.

Both Tafuri and Jameson recognize that with consumerism the old contradictions of capital are still at work, but in new forms; and that the significant feature of postmodern consumerism is that the multinational world system now penetrates and colonizes the Unconscious (i.e. the media and mass culture commodify "the mind"), the "precapitalist agriculture of the Third World," and the interior, or home or family.¹⁰⁶

For Tafuri and Jameson, critical theory "tends to be accompanied by a mood of pessimism and hopelessness that naturally enough accompany the sense of a total system, with nothing outside itself, within which local revolts and resistance come to be seen, not as the emergence of new forces and a new logic of a radically different future, but rather as mere inversions within the system ... no longer dialectical in their force."¹⁰⁷ Concerning this Jameson writes that there is an "assumption [notable in Tafuri] that everything that does not effectively disrupt the social reproduction of the system may be considered as part and parcel of the reproduction of that system."¹⁰⁸

Jameson would like to fix this problem. Hence he develops a "Marxist response" (which he reads as present in Marx's *Grundrisse*) to this lack of effectiveness of subversive techniques and of individual agency:

A socialist revolution and a socialist society are not possible until capitalism has somehow exhausted all its possibilities, ... has become a worldwide and

¹⁰⁶ Jameson, "Architecture and the Critique of Ideology," 451.

¹⁰⁷ Jameson, "Architecture and the Critique of Ideology," 451.

¹⁰⁸ Jameson, "Architecture and the Critique of Ideology," 459.

global fact, in which universal commodification is combined with a global proletarianization of the work force. ... In that case, the chances for socialism are relegated to some far future, while the ominous nature of the current “total system” becomes rather positive again, since it marks precisely the quantum progression toward that final global state. ... Socialist revolution is here by definition global revolution or it is nothing.¹⁰⁹

The possibilities for aesthetic production under such a globalized system now are solely postmodern possibilities, according to Jameson: while “the symbolic act of high modernism ... seeks to resolve contradictions by stylistic fiat, ... postmodernism ... simply ratifies the contradictions and fragmented chaos all around it ... contenting itself with eliminating the affective charge of pathos, of the tragic, or of anxiety, which characterized the modern movement.”¹¹⁰ For Jameson, postmodern aesthetics represents

the emergence, ... with some properly postmodernist practice of pastiche, of a new free play of styles and historicist allusions now willing to “learn from Las Vegas,” a moment of surface rather than of depth, ... a moment when the logic of media capitalism penetrates the logic of advanced cultural production itself and transforms the latter to the point where such distinctions as those between high and mass culture lose their significance (and where the older notions of a “critical” or a “negative” value of advanced or modernist art may also no longer be appropriate or operative).¹¹¹

Having sketched (1) what the political economy looks like (global consumer capitalism), and (2) what methodologies the dominant modes of cultural production deploy (surface rather than depth, pastiche, relaxed criticality, etc.), Jameson sketches (3) the structural link between (1) and (2). This is his claim that what the postmodern economy precisely “does to” postmodern cultural production is to co-opt, mass-market, and politically defuse it. Jameson then presents his tactical,

¹⁰⁹ Jameson, “Architecture and the Critique of Ideology,” 452.

¹¹⁰ Jameson, “Architecture and the Critique of Ideology,” 460.

¹¹¹ Jameson, “Architecture and the Critique of Ideology,” 455–456.

Gramscian enclave theory as the only timely (i.e. periodically correct) “solution” to these difficulties for aesthetic production.

Surprisingly Jameson asserts that a systematic transformation of the relation to capital within individual aesthetic disciplines is possible and meaningful through some “Gramscian alternative” where “a very different perspective on architecture and urbanism today is also given.”¹¹² For Jameson the Gramscian alternative is the development of “counterhegemony” which is to be “construct[ed] within the ongoing dominance of the ‘hegemony’ of capital ... the elaboration of a set of ideas, countervalues, cultural styles, which are virtual or *anticipatory*, in the sense that they ‘correspond’ to a material, institutional base that has not yet ‘in reality’ been secured by political revolution itself.” This suggests “something like an *enclave* theory of social transition ... theorized in terms of small yet strategic pockets or beachheads within the older system ... fanning out ... gradually ‘colonizing’ what persists around it.”¹¹³

“Fanning out”—but how? According to Jameson hegemony is not addressed head on, so to speak, with counterhegemony, but rather we need to work up to employing real-world counterhegemony, in a progression where the mere “existence of radically different spaces elsewhere (of whatever unequal realization) is what objectively opens the possibility for the coming into being and development of ‘counterhegemonic’ values here.”¹¹⁴ (By way of clarification, our most advanced, First World, capitalist economies correspond to the just-cited “here,” and our less developed economies correspond to his “elsewhere.” This is central to his argument.) Trying to get away from pronouncing the Gramscian alternative itself a failure based only on the evidence of history’s many, real-world material failures of built utopian enclaves, he notes that the conditions of possibility for counterhegemonic values are to be found in the second

¹¹² Jameson, “Architecture and the Critique of Ideology,” 452. He also writes here that “this is what may be called neo-Gramscianism, the more ‘optimistic’ assessment of some possible ‘long march through the institutions,’ which counterposes a new conception of some gradualist ‘war of position’ for the classical Leninist model of the ‘war of maneuver,’ the all-or-nothing seizure of power.”

¹¹³ Jameson, “Architecture and the Critique of Ideology,” 452–453. Jameson also notes here that for him the Gramscian alternative counts on Marx’s formulation in *Critique of Political Economy* that “productive forces developing in the womb of bourgeois society create the material conditions for the solution of the antagonism [of all previous history as class conflict].”

¹¹⁴ Jameson, “Architecture and the Critique of Ideology,” 455.

and Third World, in projects that are not possible in the First.¹¹⁵ He does not give any examples of such projects, yet he does note that the First World's postwar reduplication of "dismal glass boxes" has "manifestly failed to regenerate anything around them"; rather, "pseudo-Corbusian towers in the desolation of parks have become the battleground of an unending daily war of race and class." This reality is so devastating that "this uninspiring balance sheet would settle the fate of the Gramscian alternative if the 'enclave theory' were its only plausible interpretation." Enclave theory in itself, however, is "an overly reductive and rather defensively 'materialist' conception of the politics of space," so we have to reconcern ourselves with his reading that Gramsci's concept of hegemony "attempts ... to displace the whole distinction of materialism versus idealism."¹¹⁶ If this is so, he writes,

It would therefore no longer be "idealist" in the bad old sense to suggest that "counterhegemony" means producing and keeping alive a certain alternate "idea" of space, the urban, daily life, and the like. It would then no longer be so immediately significant ... that architects in the West ... —owing to the private property system—do not have the opportunity of projecting and constructing collective ensembles that express and articulate original new social relations (and needs and demands) of a collective type.

The essential would rather be that they are able to form conceptions and Utopian images of such projects, against which to develop a self-consciousness of their concrete activities in this society (it being understood ... that such collective projects would only practically and materially be possible after a systematic transformation of society).¹¹⁷

¹¹⁵ Jameson, "Architecture and the Critique of Ideology," 454–455. In *Postmodernism*, 274, Jameson defines the "Second World" as the "Soviet Union [of] the Khrushchev generation."

¹¹⁶ Jameson, "Architecture and the Critique of Ideology," 454 (a reference again to the "idealistic" influence on Jameson of Lefebvre).

¹¹⁷ Jameson, "Architecture and the Critique of Ideology," 454. Also note that on my view Jameson's indication that it is not significant that architects in the West can't build anything progressive—owing to the private property system—is advising them to "do their idealistic work" even though it is prevented—or worse, destroyed each time—owing to the private property system. In my view, ignoring the impact of the economic on the cultural is not helpful. It is a bit like condoning rebuilding structures on hurricane-prone beaches, or flood plains, even though those structures are destroyed each time they are built, as the environment in which they

And, astoundingly, Jameson writes that “such Utopian ‘ideas’ are as ‘objective’ as material buildings” because the possibilities of “conceiving such new space have conditions of possibility as rigorous as any material artifact.”¹¹⁸

These excerpts include a host of Jameson’s underlying assumptions, including: that we ought not try to actually affect spatial and social relations by building architecture; that we need to develop a self-consciousness about our concrete activities, about what is “really” going on in our society and our roles in our profession and the economy at large that we (somehow) failed to develop by reading Marx, Tafuri, Jameson, and others; that architects need only sketch or conceive images of clearly idealist utopian projects, in effect sketching a mirror in which our own critical consciousness can finally appear; and lastly that the conditions of producing a sketch of some new social relations is *as rigorous* as every effort that would flow from implementing that vision “as a material building.”

Regarding Tafuri now, Jameson surmises that perhaps it was the “thirty-year institutionalization of Gramsci’s thought within the Italian Communist Party” that accounts for what he calls Tafuri’s “stark and absolute position ... which is [a] symbolic repudiation” of Gramscian tactics.¹¹⁹ This fact of Gramsci’s assimilation in the Italian context is indeed confirmed by Jean-Louis Cohen’s work on the special relation of Italian intellectuals to Gramsci in his article “The Italophiles at Work.”¹²⁰ Jameson now moves to cite Tafuri in support of the idea of building enclaves (despite the fact that Jameson claims they need not be built under a Gramscian approach), for what amount to Jameson’s only architectural examples of built enclaves as

are built cannot change. Condoning this cycle is not idealist, but rather a misappropriation of resources, Sisyphean and ostrich-like.

¹¹⁸ Jameson, “Architecture and the Critique of Ideology,” 454. “As rigorous”? Are the conditions of an architect producing a bird’s-eye perspective sketch of some new social relations (such as the scattered-site housing of individual poor families in rent-controlled, fully renovated pool houses and carriage houses within gated, upper class residential enclaves) really *as rigorous* as every effort that flows from implementing that vision “as material buildings” (in the West or in any other-numbered world Jameson refers to)? I think not.

¹¹⁹ Jameson, “Architecture and the Critique of Ideology,” 452.

¹²⁰ Jean-Louis Cohen, “The Italophiles at Work,” in Hays, ed., *Architecture Theory since 1968*, 510–511.

strategic pockets or beachheads within capitalism. Jameson claims that “Tafuri’s assessment of such communes is particularly instructive” (meaning “instructive” to the extent that Tafuri appears to support his idea of building enclaves).¹²¹ Jameson cites Tafuri’s mention of the Italian Communist Party’s administration of Bologna in the 1970s, and the Karl-Marx-Allee in East Berlin, to indicate that Tafuri supports the idea that discrete, built enclaves can be successful beacons pointing the way for socially just development.¹²² But in the same breath that he asserts a role is secured for a more “positive” and Gramscian architectural criticism, over against Tafuri’s negative variety, he admits a mere parity between his strategy and Tafuri’s: “In reality, both of these critical strategies are productive alternatively according to the situation itself, and the public to which the ideological critic must address herself; and there is no particular reason to lay down either of these useful weapons.”¹²³ According to the audience, yes. Consideration of reception is always reasonable. But it has been my experience that implemented as well as the merely conceptual (Gramscian) strategies are well received by middle- and upper-class audiences, while solely the implemented strategies are preferred by those noticeably and currently oppressed by the dominant ideology.

What should we take away in conclusion from Jameson’s mix of acceptance and rejection of various Tafurian elements, cited examples, theories, analysis, and critical cuts in “Architecture

¹²¹ Jameson, “Architecture and the Critique of Ideology,” 453. Jameson then claims (pp. 453–454) that “it is precisely some such ‘enclave theory’ [again referring to the ‘red communes’ such as Tafuri’s example of Bologna as enclave examples] which on Tafuri’s analysis constitutes the ‘Utopianism’ of the modern movement in architecture; that, in other words, Tafuri’s critique of the international style ... is ... a critique of [its] enclave theory itself.”

¹²² Jameson, “Architecture and the Critique of Ideology,” 455. Jameson is citing Tafuri, *Modern Architecture*, 332, 326, which notes how Karl-Marx-Allee in East Berlin reorganizes an entire district, establishes an axis in that city “different from that developed historically,” and “inverts the logical manner in which a bourgeois city expands by introducing into the heart of the metropolis the residence as a decisive factor.” Tafuri writes that this development “succeeds perfectly in expressing the presupposition for the construction of the new socialist city, which rejects divisions between architecture and urbanism and inspires to propose itself as a unitary structure.” And Jameson is citing Tafuri’s observation (*Modern Architecture*, 322) of how, as Bologna’s (then new) leftist city administration sought reforms for which they had campaigned for decades, the Italian workers’ movement was “summoned to a historical test whose repercussions may prove to be enormous, even outside Italy.” Jameson, “Architecture and the Critique of Ideology,” 453, claims those lines from Tafuri in *Modern Architecture* “betray a rather different Tafuri than the somber historiographer of some ‘end of history.’”

¹²³ Jameson, “Architecture and the Critique of Ideology,” 455.

and the Critique of Ideology”)? I suggest this: Jameson contributes a great deal, but Tafuri’s critical thought is not outmoded, which (I am convinced after reading Jameson) is the same as saying postmodernism does not periodically “replace” modernism. Rather postmodernism and its mode of critical thought are part of, an extension of, modernism, where it is not necessary to draw lines, and it is indeed more useful to add them together.¹²⁴ From a modern to a postmodern period the backdrop remains capitalism, against which reformist and leftist thought continue to struggle to sustain any sort of critical modes of production and to make any inroads that are not co-opted or washed away by the resiliency of so dominant a system. Critical thinking opposed to capital has continuity. From time to time we figure out different ways (styles) to express it aesthetically. This has continuity solely because its opposition, capitalism (in all its various stages a theorist might schematize), has continuity as well.

Asserting the postmodernist aesthetic to be “quite distinct from the high modernist from which it seeks to disengage itself,” Jameson mistakenly believes Tafuri has not fully appreciated this

¹²⁴ I have tried to understand why Jameson continues to argue against “the position that postmodernism is itself little more than one more stage of modernism” (*Postmodernism*, 4). I can agree that regarding cultural production, the postmodern aesthetic is original, differentiating itself from the modern aesthetic primarily regarding (following Jameson) “the dialectic of inside and outside and the question of ornament and decoration” (“Architecture and the Critique of Ideology,” 460). I can agree also that a big difference exists regarding modernism’s emphasis of social criticism and structure, versus postmodernism’s use of irony and focus on surface. Jameson tries to differentiate them on p. 4 of *Postmodernism*, but only in fact points out, at the most, that cultural absorption is a little faster now. In fact, when I boil down what Jameson writes on this page it becomes a statement that both modern and postmodern works, once considered ugly, no longer scandalize anyone, are canonized, absorbed, and quickly become “at one with the official or public culture of Western society.” While this statement leaves alone the fact that their aesthetics are indeed different, it suggests clearly that their use by and relation to capital and the political economy remains the same. Namely, aesthetic production continues to be co-opted to legitimate (someone’s) political-economic dominance. It is clear that recent modes of political-economic dominance change. Recent tactics are indeed little more than a necessary mutation of the modern modes of political-economic dominance. In short: on my view culture’s aesthetics can be periodized, and modes of political-economic dominance can be periodized too; but the *relation* between them remains little more than one stage after another of a hegemony that continues to co-opt aesthetic modes. (And architecture—to my knowledge best pointed out by Jameson, and revitalizing, for me, Heidegger’s lowly categorization of it as an art—is a great example of this, due to its reliance on capital coupled with capitalists’ need for it as legitimating.) See the conclusion of my dissertation.

distinction,¹²⁵ that Tafuri assumes social reproduction in late capitalism takes much the same form as in the modern period.¹²⁶ Jameson's mistake is egregious, for he writes this just after citing Tafuri's comment that, after high modern aesthetic production, the stylistic goals had changed to where "in this phase it is necessary to persuade the public that the contradictions, imbalances, and chaos typical of the contemporary city are inevitable. Indeed the public must be convinced that this chaos contains an unexplored richness, unlimited utilizable possibilities, and qualities of the 'game' now made into new fetishes for society."¹²⁷

The stylistic approach Tafuri has just identified—of accepting contradictions in the work—is for Jameson a philosophical formulation of the postmodernist aesthetic.¹²⁸ It is the idea of expressing "a set of inert differences randomly coexisting ... in the service of a new kind of perception for which tension, contradiction, the registering of the incompatible and the clashing, is in and of itself a strong mode of relating two incommensurable elements, poles, or realities."¹²⁹ I can accept this as postmodernism, and on my reading Tafuri does as well, but we should recall the following well-reasoned description by Tafuri (and we should recall that in "Architecture and the Critique of Ideology" Jameson cites this description)¹³⁰ of postmodern work:

The contradictions of the contemporary city are resolved in multivalent images, and by figuratively exalting that formal complexity they are dissimulated. If read with adequate standards of judgment this formal complexity is nothing more than the explosion of the irremediable dissonances that escape the plan of advanced capital. The recovery of the concept of *art* thus serves this new cover-up role. It is true that whereas industrial design takes a lead position in technological production and conditions its quality in view of an increase in consumption, pop art, reutilizing the residues and castoffs of that production, takes its place in the

¹²⁵ Jameson, "Architecture and the Critique of Ideology," 460.

¹²⁶ Jameson, "Architecture and the Critique of Ideology," 459.

¹²⁷ Tafuri, *Architecture and Utopia*, 139.

¹²⁸ Jameson, "Architecture and the Critique of Ideology," 460.

¹²⁹ Jameson, "Architecture and the Critique of Ideology," 460.

¹³⁰ Jameson, "Architecture and the Critique of Ideology," 458–459.

rear guard. But this is the exact reflection of the twofold request now made to the techniques of visual communication. Art which refuses to take its place in the vanguard of the production cycle, actually demonstrates that the process of consumption tends to the infinite. Indeed even the rejects, sublimated into useless or nihilist objects which bear a new *value of use*, enter into the production-consumption cycle, if only through the back door.¹³¹

The equivalence Jameson draws between his and Tafuri's views is founded on the word "impotence." Politically charged aesthetic production is impotent because it is co-opted immediately or shortly after it is produced. Therefore Jameson asserts that any viable critical or negative dialectical value of art may now be an "older notion" that may "no longer be appropriate or operative."¹³² Jameson is prematurely disregarding the effectiveness of criticality in the arts, and he is saying, along with Tafuri, that politics is radically disjoined from aesthetic practice. Politically charged aesthetic production is always co-opted, mass-marketed, diluted—in other words, aesthetic producers cannot sustain production of politically charged work. Or worse—and Jameson states this is the actual case—politically charged aesthetic concepts cannot be built, they can only be imagined or sketched in so-called alternative (Gramscian) spaces, simply because real-world capitalist relations exhaust them.¹³³

On my reading, Jameson describes the dominance of multinational capital in a way that amounts to Tafuri's perspective that "there can be no qualitative change in any element of the older capitalist system—as, for instance, in architecture or urbanism—without beforehand a total revolutionary and systematic transformation."¹³⁴ For in the conclusion of "Architecture and the Critique of Ideology" Jameson (interrogatively) poses the thought that "no fundamental changes can be made, within the massive being of late capitalism," and he asserts that both Tafuri's position and postmodern cultural production equally "do nothing" in the cultural sphere directly

¹³¹ Tafuri, *Architecture and Utopia*, 137.

¹³² Jameson, "Architecture and the Critique of Ideology," 455–456.

¹³³ As Jameson has already noted, this position of his is consonant with the Althusserian tradition of the "semi-autonomy" of the levels and practices of social life. Artists can be political, like other individuals, but their work today cannot be political.

¹³⁴ Jameson, "Architecture and the Critique of Ideology," 452.

“against” capital.¹³⁵ He states that his Gramscian concepts are not better or worse than but are just as potent as Tafuri’s.¹³⁶ Among his closing remarks on this is his reading that “Tafuri’s thought lives this situation in a rigorous and self-conscious stoicism, whereas the practitioners and ideologues [e.g. Jameson] of postmodernism relax within it, inventing modes of perception in order to ‘be at home’ in the same impossible extremity.”¹³⁷

Jameson on Architecture, Culture, and the Economy in *Postmodernism, or the Cultural Logic of Late Capitalism*. Jameson expands upon several of the key themes of his essay “Architecture and the Critique of Ideology” in *Postmodernism, or the Cultural Logic of Late Capitalism*. By the time he composes and revises the essays on various arts for inclusion in *Postmodernism*, it is clear that his interpretive method has become the reading of certain buildings, paintings, texts, or sculptures as allegories for the structure of postmodern, multinational capitalism. To many architects his most famous allegory is his analysis of what he calls “a full-blown postmodern building”—John Portman’s Westin Bonaventure Hotel in Los Angeles.¹³⁸ With the Bonaventure Hotel his principal allegorical point is that postmodern

¹³⁵ Jameson, “Architecture and the Critique of Ideology,” 461. On my reading Jameson believes Tafuri effectively says “Do nothing” to the practitioner. But see these citations of Tafuri concerning his commitment to the present and to contemporary production: In *Architecture and Utopia*, 173: “Significant indeed is the ever-growing interest in Preobražensky, a Soviet theorist of the twenties. Increasingly clear is the role Preobražensky played as forerunner of a theory of the plan based explicitly on dynamic development, on organized disequilibrium, on interventions that presuppose a continual revolution of mass production.” In *Architecture and Utopia*, 175: “The question to which an advanced level of programming must respond is, ‘What systems of values are generally coherent and guarantee the possibility of adaptation and therefore of survival?’ ... All opposition between plan and ‘value’ falls away.” In *Architecture and Utopia*, 176: “The consequences of such phenomena, here barely touched upon, for the structure of planning and for the organization of designing, constitute a still completely open problem. It is, however, a problem which must be faced today and in regard to which didactic experimentation must take a position.” And in *Theories and History of Architecture*, 204–205, he also writes that it is “the roles attributed to planning that change radically,” so what critical theory and architecture need to do well is “find out how to re-insert past utopias into present reality.”

¹³⁶ Jameson, “Architecture and the Critique of Ideology,” 455.

¹³⁷ Jameson, “Architecture and the Critique of Ideology,” 461.

¹³⁸ Jameson, *Postmodernism*, 38. Also in *Postmodernism*, Jameson extensively considers Frank Gehry’s own house of 1979 as an allegory for the postmodern experience. Here the house’s metal skin is a technological wrapper of historicist (not historical) spaces; the low technology of this skin is an allegory for the great divide between the first world’s remarkable technologies and the third world’s reuse, as scavengers of sorts, of those technologies as they are outmoded; and

space—like multinational capitalism—exceeds the individual’s ability to cognitively map his place in it. According to Jameson postmodern space/multinational capitalism is confusing because the individual cannot locate himself, navigate it, or recognize others who might be in a similar situation and with whom he might therefore share any form of “class consciousness” According to Jameson he “anticipated [this] process of proletarianization on a global scale.”¹³⁹

Now this idea that we ought to develop a sense for cognitive mapping—a solution Jameson did not quite reach by the end of “Architecture and the Critique of Ideology” to the problem that class consciousness is different now because capitalism is different—is the main deliverable of *Postmodernism, or the Cultural Logic of Late Capitalism*. Although he does not know if any new aesthetic of postmodernism can in fact deliver this tool, he superbly considers it at length and repeatedly, and considers the linked question of whether or not the semi-autonomy of the cultural sphere has indeed been destroyed by the logic of late capitalism.¹⁴⁰

For Jameson this idea of unmapability corresponds to the fact that the galloping postmodern free market, only modestly challenged by disorganized sporadic socialisms of any kind, brings a form of chaos to our lives (“a decentered communicational network in which we find ourselves caught as individual subjects”)¹⁴¹ and appears to trump any nationalism, or local knowledge, that used to exist to allow us to keep our bearings in the world.¹⁴² According to Jameson cognitive mapping is the same as class consciousness and is required of us—but class consciousness is different now because capitalism is different now.¹⁴³ What should be cognitively mapped or made conscious is nothing less than the cultural dominant of the logic of late capitalism, as well as our

the spaces in between the skin and the old parts of the house are the potentially new allegories of what postmodern space is/could be. Along the way he elevates his postmodern critical perceptions of the Gehry house as more valuable than the perceptions of another critic—Gavin Macrae-Gibson, who wrote *Secret Life of Buildings*, a superb book on the Gehry house—whom he periodizes as “modern” in much the same way he attempted to periodize both Tafuri and Keynesianism in “Architecture and the Critique of Ideology.”

¹³⁹ Jameson, *Postmodernism*, 417–418 and 44.

¹⁴⁰ Jameson, *Postmodernism*, 48. Jameson also considers this in Chapter 8 on economics and Chapter 10, the conclusion to the book.

¹⁴¹ Jameson, *Postmodernism*, 44.

¹⁴² Jameson, *Postmodernism*, 417.

¹⁴³ Jameson, *Postmodernism*, 417–418.

current social structure in our historical moment, and the totality of our class relations on a multinational scale.¹⁴⁴ Mapping this, for Jameson, is on the same order of magnitude as mapping “the subject’s imaginary relationship to his real conditions of existence” (ideology, as defined by Althusser), which is the same as being able to represent, or “see,” the entire global system’s ideology.¹⁴⁵

According to Jameson, cognitive mapping may be the tool needed to achieve a breakthrough to some yet unimaginable new mode of representing capitalist relations “in which we may again begin to grasp our positioning as individual and collective subjects and regain a capacity to act and struggle which is at present neutralized by our spatial as well as our social confusion.”¹⁴⁶

Since Jameson expands further on the possible political effects of postmodern aesthetic production in chapters on ideology and economics and in the conclusion to *Postmodernism*, his thoughts on this will enter my considerations again, in this dissertation’s conclusion on the possible political effects of architectural production under capitalism.

IV. Regarding Tafuri’s and Jameson’s Penetration of the Theme That Architecture’s Other Is the Economic

Effectively Tafuri and Jameson point out that architecture’s other or exterior, the economic, is in fact central to any consideration of innovative architectural production under capitalism.¹⁴⁷ In addition they both place great significance on the fact that innovative architectural production has repeatedly faltered in the face of overwhelming market forces such as financial speculation, real estate values, and globalization, and has effectively proven only to enrich the business system of the general market of building design and production. As well they both indicate that building programming, production, financing, and the material dimensions of architecture

¹⁴⁴ Jameson, *Postmodernism*, 46 and 416.

¹⁴⁵ Jameson, *Postmodernism*, 51.

¹⁴⁶ Jameson, *Postmodernism*, 54.

¹⁴⁷ See Jameson in “Architecture and the Critique of Ideology,” 448–449. See Tafuri, *Architecture and Utopia*, 109.

require serious contemplation if one is to have a chance at making innovative architecture capable of outlasting its consumption as mere building image or advertising.¹⁴⁸

It is well known that Tafuri and Jameson wrote to emphasize the possible social function of aesthetics relative to capitalism. They stress the goal of maintaining some tangible, possible political effects, such as the ability of architecture to mollify the negative effects of capitalistic relations, to reform or change them, even to revolutionize them. Insistent as he is on his criteria that social equilibrium be guaranteed in any architectural or urban development, Tafuri is forced more than most into black and white readings, and he of course then prefers revolutionary to reformist or conservative thought. For example, for Tafuri reformist architecture is killed off precisely by what it is trying to reform—the capitalist market of building design and production, its financial speculation, and real estate values. He must discredit any reformist programs (the Bauhaus, Le Corbusier's urbanism) as he has seen so clearly how good reformist thought has been used and usurped for socially asymmetric capitalist development.

Tafuri's and Jameson's approaches to the possible effects of architecture upon the massive being of capital result in the specific uniqueness of each of their critiques: (1) Tafuri insists that architecture be conceived as that cultural production that can drill a theoretical/revolutionary hole right through the heart of the massive being of capital, even though its instruments are continually dulled by the superior hardness of capital, and so need to be tirelessly resharpened and recalibrated, again and again. (2) Jameson, instead, appreciating Tafuri's troubles along his more direct path, reengineers (retrofits, renovates) an idea of how cultural production could perform an end run around the massive beings of capital and the market—his Gramscian side step—an enclave theory of cultural production. Yet Jameson readily admits that the troubles along his path to possible political effects may be different, but are equal to (equally frustrating as) Tafuri's.

¹⁴⁸ This was also the emphasis of another useful work on architecture and the economy by McLeod, Mary. "Architecture and Politics in the Reagan Era: From Postmodernism to Deconstructivism" *Assemblage 8* (February 1989), rpt. in Hays, ed., *Architecture Theory since 1968*, 680–702. See page 697.

Tafuri and Jameson are following in the footsteps of Ernest Mandel's 1978 theorization, from which they drew heavily.¹⁴⁹ Jameson accepts as much as Tafuri that reformist architecture is killed off precisely by what it is trying to reform. Even though Jameson strongly discredits the dialectical historiographic approach that drove Tafuri to that conclusion, he accepts Tafuri's conclusion nonetheless, specifically accepting that he too sees clearly how good reformist thought is used and usurped for socially unequal capitalist development. Following either path to theorizing possible effects of architecture upon capitalism, I suggest it is useful to assume that each theory has penetrated deeply but has hit a wall in their repeated touching upon the issue of architecture's relation to the economic.

I suggest that the possibilities for architecture under capitalism can fruitfully continue to be theorized by developing a better picture of what is deemed to be the economic—of what I refer to as “the vernacular” or the general market of building design and production in Chapter 2. For example, while both Tafuri and Jameson mention Bourdieu, neither of them attempt to better understand the effects of the fields of political and economic power on the production of architecture by applying anything like Bourdieu's social theory of practice to the field of architecture. Of course several architectural historians and sociologists did this in the 1980s and 1990s. I recognize them in Chapter 2, and in order to extend Tafuri's and Jameson's thinking I apply Bourdieu's social theory of practice to the field of architecture, and compare that to Tafuri's thinking on this (where I have found it) and to the work of others since.

And finally, perhaps least developed by Tafuri and Jameson is any analysis of business interests in the general market of building design and production. By this I mean that the question of architectural production in relation to business interests presents the need to investigate the matrix of possible positions an architect can have in relation to the others involved in any building project. I will do this in Chapter 2, and make a sober analysis of the possible attitudes and professional behavior conducive to maximizing power as an architect in the field of building. This is with the aim of developing these concepts beyond what Tafuri and Jameson were able to accomplish.

¹⁴⁹ See Jameson, “Architecture and the Critique of Ideology,” 461, n.6.

Chapter 2

Architecture and Business Interests

I. Introduction

There is innovative architectural production, average architectural production, and the rest of the built environment (which also includes the work of architects in its production)—what we may refer to as the “vernacular” or general market of building design and production conditioned for the market. I am not the first to draw this three-tiered distinction. Sociologists and sociologically minded architects have already looked at the field of architecture this way. Robert Gutman, Dana Cuff, Garry Stevens, and Andrew Saint, for example, have looked specifically at the general market, the high end, as well as the average practice struggling for recognition so as to move above average.¹ It is also not new to treat architecture as a field of cultural production along the lines of sociologist Pierre Bourdieu’s structuration. Bourdieu, in looking at the fields of cultural production generally, situated aesthetic producers in three such tiers within their fields, and in addition has gone so far as to put forward an overarching framework of all social relations wherein the (political-economic) production of the field of power dominates the production of the aesthetic fields.² That is the organizational principal of Bourdieu’s famous first diagram in *The Field of Cultural Production*, which indicates that hierarchy of social relations where the field of political power is dominant, overarching, and encompasses the economic field, which itself encompasses the fields of cultural production, among them architecture.³

This is the framework, it seems to me, of the social and political domination to which the architect is subject, which Tafuri and Jameson are forced to accept. In fact both Tafuri and

¹ See Robert Gutman, *Architectural Practice: A Critical View* (Princeton: Princeton Architectural Press, 1988); Dana Cuff, *Architecture: The Story of Practice* (Cambridge: MIT Press, 1991); Garry Stevens, *The Favored Circle: The Social Foundations of Architecture* (Cambridge: MIT Press, 1998); Andrew Saint, *The Image of the Architect* (New Haven: Yale University Press, 1983).

² Pierre Bourdieu, *The Field of Cultural Production: Essays on Art and Literature* (New York: Columbia University Press, 1993), 37–38. “First, whether they are free entrepreneurs or state employees, intellectuals and artists occupy a dominated position in the field of power” (125).

³ From Figure 1 of Bourdieu’s *The Field of Cultural Production*, 37–38.

Jameson specifically acknowledge the promise of Bourdieu's sociology. And, among others, Garry Stevens has explicitly deployed Bourdieu's methodology to research architecture culture in *The Favored Circle*. I will incorporate Stevens's work, as well as note the ways that Tafuri, Bourdieu, and Stevens all similarly perceive architectural production as a threefold social space. In addition I will reference Tafuri, Bourdieu, and Stevens to support my own assertion in this chapter that any architect's position within this social space is defined by his relation to vernacular production. My emphasis will be placed on the question of how an architect's social position in the field determines that his work is (1) compliant with, (2) in a dialogue with, or (3) operating above or beyond any direct relationship with design and production conditioned for the market. I posit that the architectural practices best to consider regarding the possibilities for architectural production under capitalism are those situated so that their methods, design, and production are in a constant dialogue with the issues of the general field of production conditioned for the market.

Innovative practitioners who manage to practice in a way I describe as "above or beyond" any direct relationship with the vernacular (Bourdieu refers to them as "restricted" or "noneconomic" producers), while they are socially at the top of their field in terms of recognition, are not the most relevant to consider regarding the possibilities for architectural production under capitalism. In fact such production above or beyond any direct relationship with the vernacular is not dependent upon any specific political economy. Such production occurs under capitalist or socialist administrations, democracies, monarchies, feudal, fascist, and religious patronage systems, etc. This is because modes of architectural production that are sustainable above or beyond any direct relationship with production conditioned for the market are not inherently relevant to nor dependent on capitalism as a political economy for their existence, and especially not for their methods and means of production.

At another end of the spectrum is architectural production that is fully compliant with the vernacular. This is what Tafuri labels production "molded on the existing order"⁴ and Bourdieu calls "large-scale production." This production does not challenge the capitalist economy, it is

⁴ Manfredo Tafuri, *The Sphere and the Labyrinth: Avant-Gardes and Architecture from Piranesi to the 1970s* (Cambridge: MIT Press, 1987), 17.

the capitalist economy. Since that economy is our baseline, it is important to dedicate a section of this chapter to fully defining this vernacular of architectural production conditioned for the market. In the section following that, I can fully consider only those modes of practice situated in a constant dialogue with this vernacular. Then, in the final section of this chapter the question becomes: How does one maximize power as an architect—power for prolonged creative influence—engaged with this vernacular of production conditioned for the market as we know it today?

II. Architecture as a Threefold Social Space

According to Bourdieu, fields of cultural production are dominated by those producers most recognized in them. Hence those dominant producers (with the language of economics being the analogue for Bourdieu) have the most specific capital in the field. They generally use their specific capital to continue to define and shape, to their liking and/or beliefs, what is considered the best cultural production, at the top of the field. Dominant production, according to Bourdieu, means to (is created to) specifically separate itself from the “dominated producers” of the middle tier struggling for recognition and specific capital in the field, as well as struggling to achieve a distance and distinction from all of the basic, banal, everyday production in the field. These separations are a structural necessity in the field. They are the means of creating the distinctions between what he calls “restricted” and “large-scale” production, distinctions (like economic gulfs, or gaps) that are strategically maintained and modified along the way by those who are able to dominate the field. Bourdieu identifies the significant outcome of this structural necessity as the fact that the restricted production of the dominant producers is not obliged to focus on economic or market concerns, while the others (focused on large-scale production) must. Those who dominate recognition in a cultural field such as architecture produce buildings, to the greatest extent possible, based solely on aesthetic or theoretical—not economic—criteria of supreme importance in the intellectual life of the members of the field. Whereas Bourdieu calls this noneconomic production, and points out that such production represents the economic world in reverse, it is also important for me to point out the related fact that this restricted production is developed above and beyond the real constraints of the everyday methods and materials of the vernacular or general market of building production (again which Bourdieu calls large-scale

production). This related fact is important because it is recognized in parallel by Bourdieu, Tafuri, Stevens, and myself: namely that the work of the dominant producers, or major architects in the field, can essentially alter, in large part, our commercial reality—the budgetary and production rules and restraints—that everyday architects, as well as those struggling for recognition and specific capital to design as they wish, must abide by on a daily basis in their own less privileged work.

According to Stevens, whose analysis follows closely Bourdieu’s conceptual schema, the dominant producers are what he calls the “major architects,” who produce the small quantity of architecture that symbolically dominates the field and which other dominant social classes recognize as Architecture itself.⁵ The major architects are the smallest and most prestigious group according to Stevens. (His major, minor, and subordinate architects correspond closely to Bourdieu’s conceptual schema of the dominant, the dominated striving for recognition, and the large-scale producers.)⁶ For Stevens the major architects are focused on symbolic resources, the minor architects struggle for the attainment of symbolic as well as economic resources for their practice, while those in the subordinate sector practice completely within an economic world.⁷

For Stevens the major architects live in a space dominated by competition to convince the field to accept their ideas about what architecture is and how it should be done, and to realize their ideas in built form. The resource at stake is not economic or material, but symbolic shares of the intellectual framework of the field. Stevens indicates that for a major architect “doing well means carving out a niche in the discourse of architecture, being a topic of conversation among others, and acquiring enduring fame.”⁸ The symbolic resources of this group are actually self-produced and passed down in the form of symbolic capital, from architect to architect, through master-pupil chains he quantifies and other social connectors among major architects.⁹

⁵ Stevens, *The Favored Circle*, 86.

⁶ See Stevens, *The Favored Circle*, 123: “Although it is a continuum, the social space of the architect can be approximated by a threefold division based on the nature of the dominant resource involved: these can be labeled the economic, intermediate, and symbolic sectors”; also pp. 143–144, and Table 4.5 on p. 145.

⁷ Stevens, *The Favored Circle*, 143–144.

⁸ Stevens, *The Favored Circle*, 123–124.

⁹ Stevens, *The Favored Circle*, 144.

For Stevens, “minor architects” are those practicing in what he calls an “intermediate” architectural social space. They are affected by both the almost entirely economic world of the subordinate sector, and the almost entirely symbolic forces and concerns of the major sector.¹⁰ One of the key contributions of Stevens’s work is his highlighting of the social link between minor and major architects. His empirical analysis of the architects listed in the *Macmillan Encyclopedia of Architects* (the *MEA*) indicates that minor architects are only loosely connected to the networks of personal relationships connecting the major architects.¹¹ These connections can buffer them from economic storms more than the subordinate sector, but not so well as to leave them completely unaffected by economic downturns.¹² He also observes that minor architects certainly participate in master-pupil chains that reproduce the major architects over time, but they tend more to be pupils, to occupy terminal nodes in the networks, rather than links in the chain from which major architects are propagated.¹³

For Stevens the “subordinate architects” are the vast body of workaday practitioners, living in a world dominated by the economic. Their practice survives on economic resources provided by the changing, general socioeconomic environment around them. Although Stevens writes that the subordinate sector “has little control over” the “general socioeconomic environment,”¹⁴ I would like to indicate that is not the case, for in reality most economic practitioners market, lobby, and network with the required entities to significantly shape the economic sectors that affect their practices. For example, subordinate architects may be in design-build firms, and/or work with or for major real estate developers who themselves spend much of their time modulating, if not controlling, the socioeconomic environment surrounding their businesses. Stevens characterizes the essential reward of the subordinate architect as monetary gain, as well as pride in a job well done.¹⁵ He indicates that where the primary resources are economic, individuals compete with

¹⁰ Stevens, *The Favored Circle*, 145 and 160.

¹¹ Stevens, *The Favored Circle*, 160–161 and Fig. 4.12 on 158.

¹² Stevens, *The Favored Circle*, 145 and 161 and Table 4.6 on 146.

¹³ Stevens, *The Favored Circle*, 160.

¹⁴ Stevens, *The Favored Circle*, 144.

¹⁵ Stevens, *The Favored Circle*, 123.

their marketable skill for the job as the resource, and firms compete for the client and client relationships as the resource—i.e. the source of work.¹⁶

The most novel production of Stevens's analysis of the *MEA* is his quantification of the sheer number of the social connections, on average, for each major and minor architect.¹⁷ His analysis shows that on average about half the major architects have had one budding major architect as their pupil. It also shows that on average each major architect has about one major and one minor architect as colleagues; has been pupil to about one master (the master about as likely to have been a major as a minor architect), and has had about one minor architect as a pupil. Revealingly, his analysis of minor architects in the *MEA* shows that on average they have only about twenty-five percent as many of those same social connections to major and minor architects. In other words, on my reading, the average minor architect is shown by Stevens to be only about twenty-five percent as well connected to symbolic capital as the average major architect—a significant disparity. And finally, on my reading Stevens shows that the subordinate architect, not listed in the *MEA*, has none of these social connections, or is on average close to zero percent as well connected to symbolic capital as the average major architect.

In order to consider what Tafuri may have written about architecture as a threefold social space, I have to consider that his major concerns, reviewed in chapter 1, generally drive him to focus on the architect's role in the political economy—unwittingly or not—and in the ideologies that drive it. Already in his introduction to *The Sphere and the Labyrinth* Tafuri addresses what he sees as a tendency for aesthetic producers to allow themselves to sidestep having to deal with “what is other to” aesthetic production, such as economic considerations.¹⁸ This sidestep or “swerve” enables aesthetic producers to reach “compromises with regard to the world and what conditions permit [aesthetic production's] existence.” On my reading this describes the working luxury that is afforded to (or perhaps earned by) the dominant producers (per Bourdieu) or the major architects (per Stevens) to deal almost exclusively with the aesthetic/intellectual issues around the field, rather than with the economic issues of the field and of everyday practice within it.

¹⁶ Stevens, *The Favored Circle*, 123.

¹⁷ Stevens, *The Favored Circle*, 157–159, Figs. 4.11 and 4.12.

Now it was Tafuri's view that much of avant-garde art and architecture (of the nineteenth to early twentieth century with which he dealt) in fact attempted to close that gap between the intellectual issues around the field and the issues of everyday practice and production within it. This is of course a laudable, perhaps noble effort, seen as having been part of modern architecture but generally doomed to failure, not only in Tafuri's but in common architectural historical accounts as well. Looking at those efforts in his introduction to *The Sphere and the Labyrinth*, Tafuri found essentially three ways that avant-garde aesthetic production works in relation to the political economy around it, which he categorized as progressive, regressive, and reformist. These three Tafurian categories I see as roughly parallel to Bourdieu's, Stevens's, and my own segmentation of the social space of architectural practice.

The term progressive avant-garde, I would insist, covers what are new and innovative works, but which Tafuri sees as attempts to accomplish too much too fast in the field of modern production, and without the cooperation or buy-in of other key players such as industrialists at one end and consumers at the other. Tafuri writes that the progressive avant-garde "clashes" with any mediating forces it encounters in the economy—i.e. the "existing order" of the modern vernacular of mass production—when the architect's concepts have mapped out neither a solid base for production nor a solid base for consumption. Think of LeCorbusier's unrealized urban projects, or Gropius's unrealized prefabricated housing and the lack of support of capital, industry, or government and of client/user acceptance, desire, or demand for the product. This progressive avant-garde, however, can cleverly express its ideas for a total, revolutionary "reconception" of architectural and/or material productions in its forms, most notably on its facades. Think of LeCorbusier's Villa Savoye's upper facade of old world masonry units stuccoed over and whitewashed, bearing on a thin steel lintel; think of the construction techniques of Mendelsohn's Einstein Tower; think of the unhomeyness of Fuller's Dymaxion houses, as those compromises with regard to the conditions of the world that permit their existence "so early" before technological development is ready to produce them, or before demand is ostensibly "ready" for them, and you will be seeing the tendency of such progressive avant-garde work not to tend toward real change, but rather to have been one-off productions now "reduced to pure propaganda" for a future yet to arrive, and impotent to affect it.

¹⁸ Tafuri, *The Sphere and the Labyrinth*, 16–17.

The term regressive avant-garde, I would insist, also covers what are new and innovative works, but which Tafuri sees as contrived in order to oppose the new commercial realities of mass production and the city with proposals for rural, suburban, and aniturban growth and design. Tafuri was inherently opposed to this as a “solution,” most famously in his review of Jefferson in *Architecture and Utopia*. The idea that avant-garde production would roll back the calendar and stop the ills of modernization (congestion, pollution, estrangement, etc.) is what Tafuri deems regressive in such work, such as that of Geddes, Unwin, and William Morris.

An avant-garde “that insists directly on reform” covers what Tafuri reads as an architect truly engaged in the new modes of production, willing to “go behind the equipment” in the way that Tafuri understood Benjamin, and insisting on using the unprecedented productive forces unleashed by a liberal capitalist ideology in order to revise the structure of the design and construction sectors, so that real benefits from modern design, efficiency, and mass production are felt by every person that uses contemporary architecture, not just its patrons (financiers) and designers (avant-garde stars). Such reform is of course institutional reform, a tall order, but it is what Tafuri repeatedly insists upon as correct, especially where he sees glimpses of its possibilities or actual occurrence, such as in the socialist administration of the city of Bologna, in the thought and works of the American progressive tradition, or in the founding of modern techniques of regional planning, in much of Hilberseimer in theory, or, yes, also in the theoretical underpinning of LeCorbusier’s unrealized urban projects.

Now Tafuri’s preference for an avant-garde that insists directly on reform generally drives him to focus on the possible political effects an architect might have. While I will consider possible political effects in the conclusion to the dissertation, it is important to develop here Tafuri’s indication that a “reform” agenda means engagement with everyday methods and means of production in an attempt to somehow alter them.¹⁹ And in a reform role, or scenario, an architect is struggling for recognition (think Bourdieu) and is more importantly struggling to find a position of power. By this I mean a social position, or role; a defined, permanent scenario for practice that provides advantageous relationships with the other agents in the field, so an

¹⁹ Tafuri, *The Sphere and the Labyrinth*, 17.

architect can creatively produce architecture for a sustainable career. For the duration of such a career the architect controls the relevance of his own production to the clients, who consume, and to the methods and materials of vernacular production that produce, much of the built environment.

Like Tafuri, but on a more technical, material level, I have seen essentially two paradigms under which an architect can work where there is an intentional relationship to the vernacular. These are what I refer to in Diagram 2.1 as “customize the conventional” and “use the conventional unconventionally,” and they correspond to Tafuri’s “regressive” and “reform” avant-garde categories, respectively. (Architects I categorize as “able to work above and beyond” any relation to the vernacular are those enabled to “customize anything,” and correspond to Tafuri’s category of a “progressive” avant-garde.) In order to explain my conception of these two sorts of architectural practice available where there is an intentional relationship with the vernacular, it is useful to compare and contrast two simple examples from the same time period. Philip Johnson’s glass house and Charles and Ray Eames’s studio, both of 1949, are similar in some ways, and different in other important ways on this point. Each posit quite differently the architect’s role in relation to the vernacular.

The Eames studio came about as part of the Case Study House program, an organized interaction between building product manufactures and the modernist California avant-garde of the time (promulgated by its publicity mechanism: John Entenza and *Arts & Architecture* magazine).²⁰ In their design the Eameses essentially assembled manufactured givens, evident in the presence of building product manufacturers’ brand names and material trade names in the call-out arrows of the project’s section detail drawings. This points to the way the Eameses saw their role, at the time of the Case Study work, as unconventionally using off-the-shelf items, perhaps to affect

²⁰ Published and edited by John Entenza from 1938 until 1962, when he left to direct the Graham Foundation, *Arts & Architecture* played a significant role both in Los Angeles’s cultural history and in the development of American modernism in general. *Arts & Architecture* was the first American magazine to popularize the work of Hans Hofmann, Craig Ellwood, Margaret DePatta, George Nakashima, Bernard Rosenthal, Charles Eames, Konrad Wachsmann, and many others. It also embodied the highest standard of graphic design attained by an American art magazine of its time, employing the talents of such designers as Alvin Lustig, Herbert Mattes, and John

their production, reception, or both. This is a relationship to the vernacular in which the architect does not control industrial production but rather designs with materials after production: as, specifier, purchaser, but not as a manipulator of the raw materials themselves. The intentionality of such a relationship lies in the architect's intention: innovation is the result of what is done with the products.

In Philip Johnson's glass house, Johnson is director of the manufacturers' methods and material processes. The attitude is that only the architect can manipulate the stock structural steel to create the right joint, the right corner detail, the right profile. In this relationship with the vernacular, where the architect customizes or overmanipulates stock items, the architect is positioned above manufacturers, reconceptualizing their production from the ground up. In the glass house, structural flange sections and steel angles are crafted together in ways completely foreign to the vernacular conception of steel as the hidden structural framework of a building. This is evident in the project's section detail drawings, about which Johnson comments: "The corner treatment and the relation of the column to the window frames ... use ... standard steel sections [to] make a strong and at the same time decorative finish to the facade. Perhaps if there is ever to be 'decoration' in our architecture it may come from the manipulation of stock structural materials such as these."²¹ Here the architect feels the need to aesthetically guide manufacturers' production. The primary attitude that informs this relationship is the thought that the manufacturers' production is in some way impoverished without architectural guidance. Or, as Bourdieu has put it, the attitude Johnson exemplifies here is a "class-based ethnocentrism which leads the defenders of a restricted culture to ... a shameful recognition of the legitimacy of the dominant culture in an effort to rehabilitate middle-brow culture."²² The roots of this attitude, on my reading, go back at least to the high-culture reactions of Ruskin, Pugin, and Semper to the qualities of manufactured products displayed at the Great Exhibition of 1851.

Follis. See Barbara Goldstein, ed., *Arts & Architecture: The Entenza Years* (Cambridge: MIT Press, 1990).

²¹ *Architectural Review* 108, no. 645 (September 1950).

²² Bourdieu, *The Field of Cultural Production*, 129.

To summarize, these two approaches, customize the conventional and use the conventional unconventionally, put the architect in a relationship with the vernacular, but each has a fundamentally different attitude toward it. In order to make any sort of evaluation of the usefulness of either of these two attitudes (toward enabling an architect to creatively produce from a position of power in a capitalist political economy), I need to develop a fuller description of the vernacular; of the attitudes toward production, business interests, and aesthetics found in the general market of building production.

III. Defining the Vernacular or General Market of Building Production

The term “vernacular” cannot simply mean building without architects. What Tafuri calls the existing order, Bourdieu calls large-scale production, and Stevens calls the work of subordinate architects is the general market of building design and production conditioned for the market. This is the shape of our contemporary vernacular, and architects are part of it. In my review in Appendix A of the historiography of the use of the term “vernacular,” I demonstrate that it has meant more than building without architects for quite some time. I also indicate that the term should be understood socially and culturally as a form of *regulated knowledge* of building. (Several new terms of my own, introduced and defined in this section, are identified with *italics* in this paragraph.) Building production conditioned for the market (which, again, includes the labor of architects in its making), as our current system of regulated knowledge of building, significantly includes: manufacturers of building products, their business strategies of *material substitution, prescribed aesthetics*, in-house design and marketing, their classification systems (of material use, application, aesthetics), and importantly, their protected categories of proprietary material production. My assertion in this section will be that industry-wide utilization of these strategies in the general market of building production has a cumulative effect, one result of which is the creation of a highly reasoned and pervasive, yet banal, *consumption apparatus* for buildings.

The extent to which a private client may go in building completely as he or she wishes today remains strictly controlled by the general expectations of the local community as a whole—by the technical rights of people and their buildings on adjoining lots, whose expectations have been

systematized into inviolable building codes, zoning regulations, community standards, and local restrictions. Buildings are thus erected using reasonable methods and materials in “voluntary” compliance with social norms expressed as the legal rights of others laid down in ordinances and code books produced by a consensus of professionals, clients, landowners, builders, and municipalities. Those who design and build for their clients—contractors, developers, and most architects—receive and consider images of these methods and materials as product brochures, advertisements in trade journals, and as prescriptively approved by their building codes, representing the reasonable methods and materials of construction they are likely to, encouraged to, and reasonably expected to use in their work. As one wades through this technical advice, building codes, expert-driven research, its specialized applications and standard practices that regulate specific building methods, the idea of building itself can be seen broken down into all its constituent parts, to remain fragmented until an architect is engaged by a client, and saddled of course with the responsibility of putting them together legally, elegantly, and within budget. This is architecture “in compliance” with the general market of building design and production conditioned for the market. Whereas the act of innovative architecture—“architecture as cultural production”—across the board of definitions in Diagram 2.1, can generally only be seen to “interfere” with the reasonableness of complying with any number of these expert-driven standard practices.

On Building Product Manufacturers. In the general market of building production today, particularly when viewed as a field of production in Bourdieu’s sense, building product manufacturers can appear particularly rooted and omnipresent, while the innovative architects can appear to just momentarily pass through the field with custom proposals and innovations. Aware that their large (economic) investment in the field can at times be shaped by the cultural changes and aesthetic innovations proposed by innovative architects, building product manufacturers can perceive them as potentially innovative but transient, uninvested, and thus potentially oblivious and uncommitted to the real impact of their proposed changes on manufacturers’ livelihoods—which are the economic underpinnings of the field. Whether these are just impressions each have of the other or can be empirically validated, in their interactions innovative architects and manufacturers must deal with feelings of simultaneous attraction and repulsion, the combination of threat and inspiration, ambivalence and lack of interest, the

frequent possibility of talking past one another and the results of acts of miscommunication that spring from these conditions.²³ I take from my reading of Thomas Crow on the avant-garde that one “function” of the innovative architects (in the first fold of Diagram 2.1) is to invent new rules for building.²⁴ It has been pointed out by other historians that innovative architects’ self-promotion and promotion of their own differences is routine in their manifestos and journals.²⁵ It has been pointed out by Bourdieu that “original experimentation entering the field of large-scale production almost always comes up against the breakdown in communication liable to arise from the use of codes inaccessible to the ‘mass public’.”²⁶ And for this dissertation I will point out that a question becomes: how practicable are architect’s inventions, and what are the potential benefits to manufacturers to use them to expand upon their business strategies, and importantly, their existing or new categories of proprietary material production?

It is clear that manufacturers follow an agenda that ensures their survival and the survival of their proprietary material applications, and that these depend upon occasional developments in design,

²³ I make this analysis based on my reading of the section “Relations between the Field of Restricted Production and the Field of Large-Scale Production,” in Bourdieu’s *The Field of Cultural Production*, 125–131; and based on my reading of avant-garde interaction with the vernacular in Reyner Banham’s *Theory and Design in the First Machine Age* (New York: Praeger, 1960). While Banham draws a huge distinction, based on material methods, between Buckminster Fuller and Gropius, Mies, and Le Corbusier as representatives of the European modernist avant-garde of the 1920s, on my reading opposed arguments about technology conceal similar attitudes about the designer’s position relative to vernacular production. Despite radical theoretical differences (Fuller versus Mies for example), their attitudes can be found very tightly packed on the same side of the spectrum, wherein the architect is conceived to dominate, control, and reconceptualize vernacular production. Both generated similar problems for the production of their work.

²⁴ The idea of the avant-garde as the research and design wing of a wider culture is attributable to Thomas Crow. See Crow, “Modernism and Mass Culture in the Visual Arts,” in Benjamin Buchloh et al., eds., *Modernism and Modernity* (Halifax: Press of the Nova Scotia College of Art and Design, 1983).

²⁵ Beatriz Colomina, “Publicity” (on Le Corbusier and *L’Esprit Nouveau*), in *Privacy and Publicity: Modern Architecture as Mass Media* (Cambridge: MIT Press, 1996), 141–200; Rosalind E. Krauss, *The Originality of the Avant-Garde and Other Modernist Myths* (Cambridge: MIT Press, 1986); Roland Barthes, *Mythologies* (New York: Hill and Wang, 1972), 139–142; Clement Greenberg, “Avant-garde and Kitsch,” in *The Collected Essays and Criticism*, vol. 1, *Perceptions and Judgments, 1939–1944* (Chicago: University of Chicago Press, 1986). Also see Beatriz Colomina, paper presented at the Philip Johnson Colloquium, New York, February 1996.

²⁶ Bourdieu, *The Field of Cultural Production*, 129.

technology, function, and marketing. A manufacturer's products are sometimes made obsolete by newer technology, or superseded by changes in need, taste, and advertised desires. Once a building material has a demonstrated value, it may enter into a cycle of ascending improvements, real or contrived, and at the same time increasing competition and/or commoditization. When tangible improvements in technology and function are lacking, manufacturers may take it upon themselves to give their products a semblance of progress by developing and marketing superficial elements of product change. This is one way in which the vernacular producers themselves regulate knowledge as they continue to create and expand the consumership of their products. But when the purpose or market for a product evaporates or is superseded by a newer (or less expensive) method of meeting the same need, the manufacturers' own survival depends on a business move (acquisition, divestment, etc.) or on renewed research, development, and marketing. None of this process relies on a single architect's or a single manufacturer's approval. So as both a cultural and an economic force, this process can be self-perpetuating, or autonomous over and above the efforts of individual architects and manufacturers. Yet at the same time, just about any single manufacturer-developed building method that can maintain a market can find its place as part of this regulating knowledge. In a sense, it is the rule of the marketplace that shapes and sizes the available methods of building. The voice of the majority, as the market, mediated through layers of marketing, production, and business interests, transmits vernacular methods just as it had transmitted older forms of the vernacular through layers of local knowledge and technique. The vernacular can still be seen as a somewhat hegemonic imposition of cultural codes of building on both individual architects and manufacturers. It is useful to briefly look at these specific examples of processes that inscribe cultural codes of building in the general market: material substitution, in-house design, and prescribed aesthetics.

On Material Substitution. Through what I call material substitution, a new material process is forced to fit the same functions and aesthetics as some previous material process.²⁷ One aspect of vernacular approaches (seen over time; see Appendix A) is to tend to apply new ideas completely within the framework of a preexistent cultural context. By this logic, new materials

or processes cannot be taken just intrinsically in the general market of building design and production. Rather, through a process of material substitution, new materials are forced toward replacing a most proximate function and/or aesthetic previously thought of as “solved” by some other material. The manufacturers of exterior building materials made a vernacular search through wood, cement fiber, aluminum, vinyl, and back to polymer-wood composites for residential applications. Manufacturers of glass and steel curtain wall technology and the component aluminum storefront system steer that approach to commercial applications only, so that consumer and market expectations are categorically respected. It is in this way that interior wall finishes—gypsum board and veneers—became a 4 x 8 foot exercise in plaster and carpentry imitation; and that after World War II millwork became standardized, and plastic laminate developed, designed, and restyled annually by manufacturers to finish that millwork. Fireproofing (the great unsolved, intrinsic problem in the modernists’ use of steel as a material) became an exercise in creative spray-on and gypsum board layering of steel substructures.

On In-House Design. Manufactured building components are obviously designed before mass production begins. They are installed at a building site according to the manufacturer’s specifications by labor that requires only the manufacturer’s specified skills. Unless hired by a manufacturer as a consultant or in-house designer, the contemporary architect’s role begins only after production, i.e., as specifier, in the showroom or sales call, or through the catalog selection. In-house designers are at work for Alcoa, reviewing test results for their enameled aluminum panel resistance to ultraviolet deterioration. They work at Andersen, Pella, Jeld-Wen, and Norco windows, trying to please architects, builders, and homeowners with one, two, or three lines of products already tailored for their likely desires. They are hard at work designing laminate finishes at Formica, Nevamar, Wilsonart, Pionite, and Lamin-Art as well, designing laminate finishes to look like various woodgrains, to imitate diamond head metal plate, depleted quarry stones, or the previously successful designs of the 1960s and 1970s in retro patterns. In work space planning, designers at Steelcase, Herman Miller, Knoll, Kimball, Teknion, Trendway, and Haworth have been redesigning the office workscape as systems furniture, inside both custom

²⁷ Braudel documents a history of such material substitutions. See Fernand Braudel, *The Structures of Everyday Life: The Limits of the Possible* (New York: Harper and Row, 1981), and *Material Life 1400–1800* (New York: Harper and Row, 1982).

and speculative office buildings, ever since the high-rise floor plan has meant the free plan.²⁸ At these in-house design departments architectural spatial concepts, from modernist to deconstructivist, are taken up, and solutions advanced, refined, then marketed, patented, and widely profited upon.²⁹ Architects who may be functioning as manufacturers' in-house designers occupy a position within vernacular (or large-scale, per Bourdieu) production, with its limitations so well described by Bourdieu that he must be cited here:

Intellectual labour carried out collectively, within technically and socially differentiated production units, can no longer surround itself with the charismatic aura attaching to traditional independent production. The traditional cultural producer was a master of the means of production and invested only his cultural capital, which was likely to be perceived as a gift or grace. The demystification of intellectual and artistic activity consequent on the transformation of the social conditions of production particularly affects intellectuals and artists engaged in large units of cultural production. ... They constitute a proletariat intelligentsia forced to experience the contradiction between aesthetic and political position-takings stemming from the inferior position in the field of production and the objectively conservative functions of the products of their activity. ... More generally, all those marginal cultural producers whose position obliges them to conquer the cultural legitimacy unquestioningly accorded to the consecrated professions expose themselves to redoubled suspicion by the efforts they can hardly avoid making to challenge its principles. The ambivalent aggression they frequently display towards consecratory institutions, especially the educational system, without being able to offer a counter-legitimacy, bears witness to their desire for recognition and, consequently, to the recognition they accord to the educational system.³⁰

²⁸ Jonathan Crinion, *Insite*, vol. 3, no. 2, November 1993, 54–65. See p. 60.

²⁹ Subtly and freely they were given this arena for their sole discretion. As Jonathan Crinion states: "Unwittingly architects and designers have ceded much of their power since World War II to manufacturers of systems furniture." Crinion, *Insite*, 55.

³⁰ Bourdieu, *The Field of Cultural Production*, 130–132.

On Prescribed Aesthetics.³¹ The manufacturer's products carry with them prescribed aesthetics. Prescribed aesthetics refer to those characteristics intentionally added to raw materials as they are turned into marketable products designed by manufacturers. The act of prescribing a material aesthetic as a service of manufacturing it is also referred to by the equally colloquial term "value-added." Products receive motifs (no matter how minor) and faint evidence of architectural styles that are not by nature integral to making the material useful, including stamped or applied patterns, grains, and imitation finishes. Prescribed aesthetics gain the manufacturer the narrow depth needed to control a market of a material application (at the expense of a wide range of applications), and have become required for a product's wide cultural and market acceptance. Marked divisions, such as commercial, residential, retail, institutional, and industrial applications, and their qualifiers: high-end/low-end, upgrade/standard, substrate/finish, are superfluous, really, to most material qualities, but these divisions prescribe certain qualities into materials applications nonetheless. Once established, business interests and defensible patents insist they remain.

Prescribed aesthetics are evident in all the marketed, predetermined uses and categorizations of a material offered by its manufacturer. For example, manufacturers' research in flat roof membranes (with insulation and waterproofing an intrinsic problem of the flat roof as a concept) was given serious productive efforts in what manufacturers categorized as commercial applications, and thus the products available as flat roof finishes carry commercial-oriented aesthetics. Those for sloped roofs carry domestic aesthetics: vacuous exercises of decorating pitches with shake, stone, and ceramic roof tile replications.

The simple codification of material into such generally accepted categories as commercial, residential, retail, institutional, or industrial reflects self-interested imperatives of the manufacturers more than it demarcates any intrinsic material characteristics or consumer demand (since the consumer is already in the first instance captive to what will be marketed to him).

³¹ My development of the concept of prescribed aesthetics is based on my observation that building product manufacturers have to work within the very strict conventions of already heavily stereotyped material applications and building types. (This is similar to, and as a translation of, that observation made by Bourdieu about the producers of Westerns as a genre of films. See Bourdieu, *The Field of Cultural Production*, 128.)

These categories are themselves a device. Once established, they simplify production within the limits of use. The limits of use are developed not solely through research, development, sales, and marketing, but also through a manufacturer's preference for applications that can simplify production where they've already made a significant capital investment in such production. Alternative material uses that require extensive reinvestment do not generally occur under such conditions. This, of course, too quickly focuses a specific aesthetic treatment on a specific product. If one is reminded of a manufacturer by name, one will immediately think of the manufacturer's prescribed use and aesthetic for a material. Or conversely, if one looks first just at a specific material, one is quickly steered to a manufacturer's defined use and aesthetic for it.

This leads manufacturers to continually refer back to previous solutions—assumed to be known—and to continually border on the pastiche or parody of previous architectural styles or motifs. A material application that manufacturers develop with ever more reference to the history of that material application (such as residential roofing) calls for this second-degree reading, reserved for the cognoscenti, of those nuances and subtleties that relate the latest production back to the history of architecture itself. It also calls for my naming and classification of those developments as the techniques of prescribed aesthetics. To look at manufacturers' production aware of the subtle reasons for and meanings of the play of allusions, fine variations, and nuances that relate the latest production back to architectural history authorizes detached, distanced perception and this sort of erudite analysis, as much as simple first-degree adherence and the aesthete's wink. The history of the prescribed aesthetics in the production of what I'd call "serious" manufacturers/tastemakers (for example Herman Miller, Steelcase, Knoll, Armstrong, Kawneer, Alcan Composites, Permasteelisa, Fypon, GAF, CertainTeed, Lightolier, Sub-Zero, Kohler, Ralph Lauren Home, or Ikea) could be read as pure architectural language games, which, turned toward production, sell as successfully to the imagination of a loyal, brand-conscious consumer as to an intellectual architectural aesthete.

The Vernacular as "Consumption Apparatus." For a theory of those processes that maintain it, the contemporary vernacular requires the manufacturers' methods as described above, plus a consumption apparatus. The consumption apparatus is a totality of objects and messages that legitimates and presents to the architect, builder, client, and public, as their natural and fixed

choices, the reasonable way to produce buildings. The general market of building production holds the authority to speak the reasonable discourse concerning the common, the typical—the architectural vernacular. And material applications, through processes of material substitution, in-house design, and prescribed aesthetics, are disseminated for use within the orders of classification systems (i.e. expert-driven technical orders of material use and classification, of building codes and zoning ordinances, etc.). As seen in the CSI MasterFormat, the vernacular comes together in the hegemony of the regulated knowledge controlling the categorized, available repertoire of building alternatives. The consumption apparatus sanctions this way knowledge has been regulated. As materials are used within classification systems, their users' output is conditioned toward a banal sort of architectural production, calibrated to the identifiable expectations of specific markets (commercial, residential, retail, entertainment, etc.). Since building code and building product discourse is the reasonable discourse, it too legitimizes this consumption apparatus by clearly delineating how various assemblies of proprietary production are the naturalized, legal, reasonable method of building. Therefore, if prescribed material applications can be altered at all, to alter them in ways unsanctioned by the rhetoric of the consumption apparatus (i.e. in unique and innovative ways) comes at considerable costs, if it is even possible. These “costs” are typically only bearable by the avant-garde, by restricted producers. For architectural materials, knowledge is regulated, and the consumption apparatus legitimizes it as the vernacular. The acquired knowledge, training, discourse, and desires of the majority of the agents in the field are, as such, vernacularized.

IV. Architectural Production in Relation to the Vernacular or General Market of Building Production

Does the idea of innovative architecture constitute some kind of fundamental adversary to vernacular production and its consumption apparatus? Do business interests somehow oppose aesthetic production? Does the ongoing existence of vernacular production beleaguer innovative production with commercialized replicas of it? The historically typical position of innovative architecture (i.e. the avant-garde) regarding the techniques that building product manufacturers employ (material substitution, in-house design, prescribed aesthetics) has been to vilify them. But has resistance to this consumption apparatus proven to benefit innovative architects or their

ability to work? In fact this last question is a peculiar one. Why should innovative architects resist the commoditization of their aesthetic inventions by vernacular forces? This very question implies that the liberty and self-direction of innovative architecture is somehow damaged by the conformity and mainstream character of vernacular production, especially when it invokes any of innovative architecture's aesthetic qualities. Even though a fundamental precept of a capitalist political economy is the protection of proprietary production, it remains legal to consume cultural and aesthetic innovations. Insofar as they are (generally) not copyrighted, it remains legal to build those innovations into pre-aestheticized uses/products, and hardly acknowledge them as a source. This is the process of co-option, the popular reproduction of unique aesthetic (or cultural, or political) acts.

The Bourdevin concept that cultural capital—not economic capital—is at stake in the first fold (per Diagram 2.1) of the social space of aesthetic production is crucial here. The problems dealt with in this section begin in the second fold, where an architect is trying to extract both cultural and economic capital from a practice.³² In that situation, which is most definitely in a

³² My research for this section includes reading the section entitled “Relations between the Field of Restricted Production and the Field of Large-Scale Production,” in Bourdieu’s *The Field of Cultural Production*, 125–131. While this section of my dissertation is not a re-presentation or review of that part of Bourdieu’s book, and I don’t need to cite it in this section as much as I do Thomas Frank, it remains important to cite the following as a theoretical basis for some of my assertions in this section:

One should beware of seeing anything more than a limiting parameter construction in the opposition between the two modes of [restricted and large-scale] production of symbolic goods, which can only be defined in terms of their relations with each other. Within a single universe one always finds the entire range of intermediaries between works produced with reference to the restricted market on the one hand, and works determined by an intuitive representation of the expectations of the widest possible public on the other. The range might include avant-garde works reserved for a few initiates within the peer group, avant-garde works on the road to consecration, works of “bourgeois art” aimed at the non-intellectual fractions of the dominant class and often already consecrated by the middle-brow art aimed at various “target publics” and involving, besides brand-name culture (with, for example, works crowned by the big literary prizes), imitation culture aimed at the rising petite bourgeoisie (popularizing literary or scientific works, for example) and mass culture, that is, the ensemble of socially neutralized works.

In fact, the professional ideology of producers-for-producers and their spokespeople establishes an opposition between creative liberty and the laws of the market, between works which create their public and works created by their public. This

relationship with the vernacular, architects should already realize they may never be properly compensated for research and development ideas (i.e. innovation) they may develop that may prove to be profitable down the road to the building industry. Therefore any sort of architectural production in relation to the vernacular has to remain open-minded on the issue of its co-option.

One of the reasons for this is that architects have no choice. This is because aside from the work of a very small number of privileged first-fold architects, or those hired directly by manufacturers, building product manufacturers dominate contact with raw materials and the process of their design and conversion into building products. Without investment in material research, without the resources to recreate the manufacturer's conditions, average architects remain unable to circumnavigate the consumption apparatus in order to manipulate raw materials themselves. The difficulties outweigh the investment, effort, and risk (in a capitalist political economy that sanctifies proprietary production) associated with the control of raw materials as a feasible architectural working method. The average architect remains challenged by the consumption apparatus to creatively use manufactured building materials designed as commodities for consumption. To produce anything innovative in this condition asks the subservient (architect/consumer) to influence the dominant (consumption apparatus). And this is precisely the point at which I must address recent cultural studies writings that recognize the creative user's inability to meaningfully affect the consumption apparatus. Co-option as the link between innovative production and the market must be dealt with dispassionately here, because it has often been written about in quasi-conspiratorial terms in recent cultural studies writings.

is undoubtedly a defense against the *disenchantment* produced by the progress of the division of labour, the establishment of various fields of action—each involving the rendering explicit of its peculiar functions—and the rational organization of technical means appertaining to these functions.

It is no mere chance that middle-brow art and art for art's sake are both produced by highly professionalized intellectuals and artists, and are both characterized by the same valorization of techniques. In the one case this orients production towards the search for effect (understood both as effect produced on the public and as ingenious construction) and, in the other, it orients production towards the cult of form for its own sake. The latter orientation is an unprecedented affirmation of the most characteristic aspects of professionalism and thus an affirmation of the specificity and irreducibility of producers.

Bourdieu, *The Field of Cultural Production*, 127–128.

The consumption apparatus can easily dominate the discrete moments in which a particular person innovates successfully. This has historically relegated works of the avant-gardes (in aesthetics) and of countercultural forces (both cultural and political) to discrete, isolated and unconnected events. We have seen avant-garde innovations appear but be subsequently watered down, emptied of content, and therefore become in a sense discontinued, while the continuity of vernacular production/discourse (despite and even by virtue of having absorbed them) retains the mantle of the reasonable discourse. For an architect to take steps to protect his aesthetic production as proprietary intellectual property (and to control the massive processes of its vertical integration) in order to realize economic capital from them, in his lifetime, in this environment, can be very time consuming and stifling to what is presumably a major goal of practice—continued aesthetic innovation. From this point of view the environment of business interests, intellectual property, and market protection do appear to “oppose” aesthetic production. This opposition could be characterized in quasi-conspiratorial terms as a mortal enemies or predator-prey relationship. Indeed it has been so characterized by cultural studies writings valorizing the transcendent qualities of user’s transgressions of manufacturer’s intent as a liberating practice. According to a binary structure, standard in much cultural studies writings of the 1980s and 1990s, such liberating practices have been passionately touted as empowering.³³

³³ I refer particularly here to certain French and Birmingham School cultural studies of the 1970s, 1980s, and 1990s, and those inspired by the Gramscian or Genetian notions of subcultural style as a counterhegemonic practice. See the discussion of subcultural styles such as those celebrated by Dick Hebdige, Stuart Hall, and Paul Willis of the Birmingham School. See Hebdige, *Subculture: The Meaning of Style* (1979; New York: Routledge, 1989), a text that makes no active use or recognition of the subjects’ “being seen” and co-opted by business interests (whereas Greil Marcus in *Lipstick Traces: A Secret History of the Twentieth Century* [Cambridge: Harvard University Press, 1989] is able to see and contextualize the co-option of punk that Hebdige does not or cannot discuss in his book). See the various “surreptitious creativities” of reuse, recoding, and deterritorialized invention that de Certeau saw emerging against the grain of capitalist structures in his “Walking in the City,” in Michel de Certeau, *The Practice of Everyday Life* (Berkeley: University of California Press, 1984). On my reading, local, subjective, or counterhegemonic practices, no matter how radical, may participate in the “second instance” of production through creative consumption, using things in subaltern ways, but do not ward off the appropriation or co-option of their own production in the inevitable, and immediately present, “third instance” of business interests reacting to them. They make no use of the anticipate/ward-off tools employed by the capitalist political economy to constantly repel and capture its own limits. See also John Fiske, *Reading the Popular* (Boston: Unwin Hyman, 1989); Stuart Hall, *Critical Dialogues in Cultural Studies* (New York: Routledge, 1996); Stuart Hall and Paul du Gay, eds., *Questions of Cultural Identity* (Thousand Oaks: Sage, 1996); Henri Lefebvre, *Everyday Life in the Modern World*

The idea is that unique cultural production brought into the capitalist marketplace shows us evidence of the hostility of a “corporate state” (business has supplanted “the state” in this analogy) and that the marketplace operates on cultural production with tools of oppression (co-option, commodification, reification) by which some “establishment” hopes to buy off and absorb its opposition. Particularly for certain cultural studies writings, this brings into focus practices of co-option and resistance, where it has been argued that whatever the capitalist marketplace produces can be quickly taken apart and reassembled by the alienated, the dominated, or the aesthetic-minded into startlingly novel subcultures of aesthetic production.³⁴ In this second-instance function of resistive consumption, which must be doubly read, the theory goes that resistance arises when signifiers are consumed and used in ways divergent from or contradictory to their manufacturers’ oppressive intent.

I can accept that signifiers of unique cultural production can be appropriated and ironically consumed in the capitalist marketplace at large. But consumer transgression, being the key to such “everyday” resistance, is also a never-ending race to violate norms.³⁵ And such norms (if they exist) are perpetually set out further on the horizon by both the innovative consumers and the producers. Thus the cultural studies readings that consumer culture is both a site of repression and of rebellion are commonplace. The narrative is predictable, that capital intends the public to

(New Brunswick: Transaction, 1984); Lefebvre, *The Production of Space* (Oxford: Blackwell, 1991; in French 1974); Paul Willis, *Learning to Labor: How Working-Class Kids Get Working-Class Jobs* (New York: Columbia, 1977).

See also where Thomas Frank describes “what might be called the standard binary narrative” of recent cultural studies. Frank is clear to note that to describe cultural production as fundamentally at odds with the impulses of business and capitalism, as “homogeneity” versus “heterogeneity,” “is to make a strategic blunder of enormous proportions.” See Frank, *The Conquest of Cool: Business Culture, Counterculture, and the Rise of Hip Consumerism* (Chicago: University of Chicago Press, 1997), 15–19.

³⁴ For example, Hebdige, *Subculture*. Also, this ability of the marketplace to so function finds its description in Gilles Deleuze and Félix Guattari’s “anticipate/ward-off” schema of capitalism’s longevity, in chapter 13: “7000 B.C. Apparatus of Capture” of *A Thousand Plateaus: Capitalism and Schizophrenia* (Minneapolis: University of Minnesota Press, 1987).

In fact, it could be argued that, if that transgressive consumption is what the artistic avant-garde has done since Duchamp’s *Fountain* in 1917, it follows that “everyday” transgressive consumption is indeed the “avant-gardement” of this popular method of consuming. It is a given that business interests have “seen” this, and that is why business itself valorizes constant change, individuality, youth, and the eternally new.

³⁵ Frank, *The Conquest of Cool*, 17.

be conformist while transgressive aesthetics of resistance (or “enclaves,” per Jameson) practice a creative subjectivity that is quickly relativized. A popular or mass production of innovations by the establishment is only made as a concession out of political necessity, or to profit.³⁶ Through that lens of cultural studies, business culture and aesthetic production are seen as irreconcilable enemies.³⁷

The unfortunate result of fixing this opposition is that the historical meaning of culture ends up being fixed as a set of liberating practices fundamentally at odds with the dominant impulses of business and capital.³⁸ But co-option is something larger than the question of “exploitation” (of unique acts), and much more complex than the struggle back and forth between capital and innovative cultural production.³⁹ I will not juxtapose the market as essentially conservative

³⁶ Baudrillard and Frank both argue that in order to have its production consumed, the purchase of a good must feel like the most radical act of receivership activity. Business interests hence channel the subject’s desire for transgression through consumption. Baudrillard’s work is typically concerned with “desire” in this sense; see in particular Jean Baudrillard, *On Seduction* (Paris: Editions Galilee, 1979).

In fact Baudrillard and Frank argue that signifiers of resistance, transgression, and creative subjectivity have been, since the 1960s, the traditional tools with which business interests advertise and market their products for consumption. Baudrillard argued this in 1985, completely theoretically, and Frank in 1997, empirically and in a readable work, with a similar theory more or less submerged. See Jean Baudrillard, “The Masses: The Implosion of the Social in the Media,” trans. Marie MacLean, *New Literary History* 16, no. 3 (Spring 1985), 557–589, rpt. in *Jean Baudrillard: Selected Writings*, ed. Mark Poster (Stanford: Stanford University Press, 1988), 207–219; and Frank, *The Conquest of Cool*. For an example of Frank’s book functioning empirically with submerged theory similar to Baudrillard’s, see p. 20, where Frank cites a department store head cited by cultural historian William Leach, regarding the way that “modern capitalism was positively liberating; by its very nature, it rejected all traditions and embraced desire.” This is basically a historical account of the rise of capitalism as a trade in “desire,” an account that Baudrillard does not reference, but about which he nonetheless theorizes. To some Baudrillard is thereby not theorizing on firm grounds. However, if one accepts the empirical work of others, Baudrillard can be read as merely conjecturing upon them.

³⁷ Bourdieu agrees with this assessment of those cultural studies referenced. And I share his disappointment with that lens of cultural studies. See Pierre Bourdieu and Loic Wacquant, *An Invitation to Reflexive Sociology* (Chicago: University of Chicago Press, 1992), 23–24, 79–83.

³⁸ My statement is developed from reading the analogous statement by Thomas Frank: “the historical meaning of hip seems to be fixed: it is a set of liberating practices fundamentally at odds with the dominant impulses of postwar American society.” Frank, *The Conquest of Cool*, 18.

³⁹ Frank, *The Conquest of Cool*, 235. In fact, rather than seeing the arts and culture as “leading” capital, Frank argues that business culture saw the “creativity crisis” in its own ranks shortly

against innovation as essentially radical. A capitalist political economy is not static, not fixed, and emphatically not an enemy of liberating practices per se. Political conservatives may be enemies of some liberating practices, but a growing capitalist political economy in fact depends on continual transgression of boundaries (cultural, social, or geographic). It depends on the expansion of styles, of taste, and of other freedoms, in order to grow the market itself. So I will not so passionately describe any user's transgressions as resistance. This dissertation, nor any individual architectural practice, will not be able to resolve the perennial question of whether the market controls consumer demand by co-opting aesthetic innovation or just reflects it: obviously it does a great deal of both.⁴⁰ Here's why:

The predetermined uses and generally accepted categories (i.e. commercial, residential, retail, institutional, industrial) of the general market of building production are generated to serve business interests because they are economically useful to them. It is not useful for architects to take exception to this type of market segmentation. The aesthetic innovations of architects, where they are co-opted, are not manhandled into such categories in order to disarm or deflate them. That would be the conspiratorial thinking of such cultural studies analysis just mentioned. Rather manufacturers and their advertisements develop market segments in attempts to call consumer demand into existence where before there had been nothing but innovative new architectural theories and seductively new, but random (to the market), architectural forms in the latest magazines, monographs, competitions, and museum shows. Manufacturers use architectural images to develop consumer demand around the costly infrastructure of production that they are obliged to somewhat speculatively put in place in order to produce the innovative architectural concepts themselves. What truly has to be internalized by the practicing architect is the fact that, on my reading, such market segmentation is not based on any logistics of the co-opted aesthetic theories themselves, nor on some genuine material characteristics, but on

after the sterile 1950s, a crisis that paralleled the larger, popular culture's assault on "conformity." As the 1960s began, an array of management books appeared addressing the problems of the 1950s. Frank sees Douglas McGregor's 1960 management milestone *The Human Side of Enterprise* as capital's equivalent to Norman Mailer's "White Negro" which also suggested a solution for conformity and the creativity-stifling Objectivist management ethics. *The Human Side of Enterprise* decried Taylorist methods, and extolled self-actualization and worker ingenuity through "Participative strategies." See Frank, *The Conquest of Cool*, 21–22.

⁴⁰ Frank, *The Conquest of Cool*, 31.

demographic, geographic (as building is place-based), and stylistic groupings carved out of the general market. When vernacular production truly capitalizes on a co-opted innovative aesthetics, it is less concerned with genuine material or aesthetic concepts than it is with targeting the needs of some knowable demographic or psychographic grouping on the consumption side, and the construction of what I will call their consumer subjectivity to the point that it will verifiably support the production.

There is no enemy of innovative architecture in business interests, no general corporate hostility toward innovative production, no agenda of large-scale vernacular production to secretly disarm, buy off, and absorb the opposition of.⁴¹ There are no such confrontations because the first fold of the social space of architecture—that of innovative architects—continues working above and beyond the general market, protected more by the speed of change in its styles than by any proprietary intellectual property enforcement, while the vernacular translates into consumer commodities the first fold's aesthetic evolution (generally as harmless to the innovator as fake Rolexes are to Rolex), emptied of content and sold for use by the designers, builders, and clients of the second and third folds.

In looking at the second fold, then, which is in a most definite relationship with the vernacular, there are two ways of working—customize the conventional and use the conventional unconventionally, per my columns in Diagram 2.1. The first hopes to influence the vernacular by attempting to improve its output by its example, while the second sees that such influence is pointless. The first thing to note in considering them together is that innovations in architectural design are appropriated, produced, and even invented by the vernacular, large-scale producers (i.e. prescribed aesthetics, material substitution). Contemporary cultural studies readings and reception theories argue that such pre-aestheticized forms given by vernacular mass production are quickly taken apart by the perhaps alienated and struggling for recognition second-fold architects, and reassembled into startling new designs. As with the innovative production of the first fold, it is transgression and the never-ending race to violate norms that are central to innovative practice in the second fold. A difference between the customize-the-conventional and the use-the-conventional-unconventionally approach appears regarding transgression, however.

⁴¹ Frank, *The Conquest of Cool*, 16.

The customize-the-conventional approach operates on the assumption, common among cultural studies readings to the point of self-parody, that such transgression of the vernacular is in fact the key to resistance and change. In the customize-the-conventional approach, this resistance takes the form of an overmanipulation of off-the-shelf components until something is produced which is wholly unique and somehow “better” than the vernacular. The idea that the vernacular agents should take a look at the transgression, and follow suit, is what counts here.

For the use-the-conventional-unconventionally approach, what counts is simply producing with off-the-shelf components, perhaps in ways divergent from or contradictory to the manufacturers’ intent. There is no reason for this approach to posit any position that would “teach” or be fundamentally at odds with vernacular production, while the customize-the-conventional approach does stake a claim that vernacular production does need to change to get better, and to follow its innovative lead. Problems develop in managing a career with this approach when the architect’s focus becomes occupied more with effectuating his desired changes upon vernacular production than with developing more innovative production. This dissertation is not an attempt to solve the debate about what effects, if any, aesthetic transgression has upon the qualities and output of vernacular production. The idea that, even as it is calculated to create consumption, vernacular production unintentionally provides various individuals with opportunities for oppositional aesthetic production, or subaltern empowerment, is not the end of my inquiry here. The trap with focusing there is that it is too easy to fall into characterizing vernacular production as that which is repressive, tradition-based, monolithic, slow to change and mass marketed, as opposed to individualized and customizable production. To identify vernacular production and cultural production in architecture according to an inflexible scheme of “homogeneous” versus “heterogeneous,” conformity versus innovation, is not an accurate portrayal of the contemporary capitalist political economy.⁴² In contemporary practice, any innovative transgression is so quickly absorbed that its transgressive distinctions cease to have mattered. The whole market, economy, building culture, moves forward with that once transgressive “freedom” now fully a part of it.

⁴² Frank, *The Conquest of Cool*, 18. Particularly the citation of John Fiske on that page.

The general market of building production is as dynamic as contemporary capitalism itself. This “existing order” (per Tafuri) is not static, it is in endless flux, to the point that both the vernacular producer and the aesthetic theory-minded (i.e. innovative) producer should agree on this: the production of architectural consumer segments, image, prescribed aesthetics, marketing strategies—the consumption apparatus—have come to take precedence over the actual production of the buildings (which production does still occur), accelerating the pace of consumption of architectural innovation itself. Any confrontational relationship between vernacular production and innovative productions becomes considerably less confrontational when examined from this perspective, because at least one logical outcome of all this is that architectural production can become less a matter of how something is physically built than of the symbols and referents by which an architect’s production addresses the public, or some segment of the public. Architectural production provides image and identity (among other things) to contemporary capitalism, which vernacular production discovers how to market (for business reasons described in the previous section) to unique segments or categories of the field. The categories actively segment building markets, rather than respond to market segments that already existed. Issues such as the truth in materials (theoretical), or physical material production (technical), are no longer as controllable by an architect as are issues such as controlling the image and brand recognition of his production within known demographics and market segments.

That architectural production provides image and identity to contemporary capitalism which vernacular production discovers how to market is an example of that larger ideological assessment of our political economy that David Harvey, Jean Baudrillard, Fredric Jameson, François Lyotard, Manuel Castells, or Saskia Sassen have understood as consumer capitalism, global capitalism, flexible accumulation, and postmodern or late capitalism. The fast pace of obsolescence known to the fashion world has been introduced to all manner of cultural production, so that the production of image, brand identity, and marketing strategy is forced to take precedence over actual material qualities and production of the products themselves. It is in this light that it is now more useful for me to diagram architectural production as a sphere of communication about the status of cultural production than simply as a field of building production. What I mean by that is that the innovative ideas generated as cultural production in

the field of architecture so directly inspire the brand identities and marketing of vernacular building production, that the point of view now worth diagramming and elaborating upon is not that of any other types of architects or manufacturers (or the clients/consumers/users covered in the next section) but the point of view of the object. (See Diagram 2.2.)

Up to this point this section has been about the point of view of first-, second-, and third-fold agents in the field of building. I will conclude this section by indicating that maximizing power as an architect in the field of building requires a seriously detached (dispassionate, unemotional) disposition regarding all of the relationships (reviewed above and in Diagram 2.1) in which the architect remains enmeshed. The processes that these relationships and the capitalist political economy put into motion, if viewed neutrally, could be viewed simply as the processes that act on the objects (that make up buildings) themselves. Diagram 2.2 is my attempt to illustrate that.⁴³ What this indicates to me is the following: To invest (either psychologically or economically) in an object of cultural production, even one that is the child of one's passionate creative activity, is problematic.⁴⁴ Here's why:

From its inception, an architectural aesthetic innovation acquires aesthetic capital (that capital relevant to the field), which is simultaneously invested in the architectural object. That object

⁴³ My approach is motivated in part by Baudrillard's assertion, in "The Masses: The Implosion of the Social in the Media," that only by taking the point of view of the object can we see what moves it, politically, economically, socially.

⁴⁴ While Diagram 2.2 is my original work, my discussion of it is influenced by Everett M. Rogers, *Diffusion of Innovations* (New York: Free Press, 1995). Rogers's "diffusion of innovations" theory, which grew out of social research of the late 1950s about how communities respond to innovation, was formalized in 1962, in the first printing of this book. Rogers states that there exists a logical "product adoption lifecycle model" of how people tend to adopt new innovations. According to Rogers each adopter's willingness and ability to adopt an innovation would depend on their awareness, interest, evaluation, and trial. According to Rogers, adoption of a new innovation can be categorized, and quantified based on a bell curve, as follows: innovators (2.5%), early adopters (13.5%), early majority (34%), late majority (34%), and laggards (16%). I was also influenced by Geoffrey A. Moore, *Crossing the Chasm: Marketing and Selling Technology Products to Mainstream Customers* (New York: Harper Perennial, 1999). See chapters 1 and 3, concerning contemporary thinking, after Everett Rogers's work, on technology product adoption lifecycle models. I was also influenced by Philip Kotler and Gary Armstrong, *Principles of Marketing*, 5th ed. (Englewood Cliffs, NJ: Prentice Hall, 1991); and by Larry Downes and Chunka Mui, *Unleashing the Killer App: Digital Strategies for Market Dominance* (Boston: Harvard Business School Press, 2000).

and images of it are now in public circulation. Its subsequent activity—the “object’s activity,” which is the activity of Diagram 2.2—is not at all similar to the “creative activity” that formed it. The object’s activity ensures that it is replicated. It is moved, in whole or in part, from birth to early adoption by others—by members of the same and of other folds in the aesthetic field, to the farthest reaches of the poles (dominant/dominated) of the field, at which poles those producers’ motivations for its use (or disuse) the object’s creator may not agree with. The object’s activity ensures that it acquires publicity, is recognized, by producers and consumers in fields other than its creator’s, fields where economic and/or political capital are more relevant. Here the object’s creator may witness it, or derivative forms of it, produced, adopted, and consumed, perhaps by the majority of another field without any recognition given to the creator, and again, to the farthest reaches of the poles (dominant/dominated) of the other field, at which poles the economic, political, and/or aesthetic qualities attributed to it there may be antithetical to or distasteful to the creator’s “original intent,” or his political or aesthetic beliefs. But if objects are antithetical to or distasteful to their creators, they are not so easily terminated on those grounds. Their useful lives are in fact extended further, beyond majority adoption, via phases of value-added renovations, and relatively meaningless differentiations applied to them, both anticipating and warding off their obsolescence. Their reproducers, with their tangible investments in an object’s physical production, tend to extend its life. An object’s consumers—fractions of class relations, of leisure activities, of lifestyle categories—consume it because they have taken up the object symbolically. Such object production revitalization techniques—or cultural happenstance that may impart meaning into the mere whiff of the object’s original meaning, as the case may be—enables its second- and third-order producers to continue to extract capital from the existence of only a shadow of its original meaning, and prop up continued production and consumption—be it value-engineered to a very low, or feature-bloated to a very high status level.

The full potential range of the production and consumption of the whole or part of an object is effectively the full range of society. The whiff of any object’s meaning can be produced and consumed by people in the farthest reaches of the poles (dominant/dominated) of every field of human interaction. The object’s promiscuous activity, then, is clearly not the creator’s “fault” nor “responsibility”; likewise fair residuals from its (economic, political, or cultural) consumption don’t always flow evenhandedly back to its creator. None of the ways other people see or

consume cultural production are its creator's "fault" in the same way that none of a child's behavior, after having grown up and left a healthy home, is the parents' "fault." So the key to properly framing an architect's healthy relationship with the object's activity—as the product of one's creative activity—is to discuss an architectural practice where creative architectural activity "throws" innovative production out into the public sphere as communication. Such an architect watches what other people do to his work—its reproduction, use, disuse, co-option in whole and in part—and, no matter where it goes, remains ready to innovate again. The next section deals with just such a dispassionate approach to passionate creative activity required of an architect when using objects out there in cultural midstream, in the tremendous sea of objects that a robust capitalist political economy has floating around us.

V. The Question of Maximizing Power as an Architect in the Field of Building

I analyze the possibilities for architectural practice in this section, with the promise that successful architectural innovation is that which actually controls some given material reality and relationships, in a building project, to see its innovation put into place. The reason I have just looked at the point of view of the object in Diagram 2.2 is because my view is that the innovative architect's role is to inject creative activity into the objective capitalist relations that structure building activity. This promise for cultural production is harmless, politically, to a capitalist political economy. The specificity of my focus on architectural innovation as that which actually influences some material reality, rather, is tantamount to/inspired by the application of Walter Benjamin's focus on the issue of whether or not an innovative work stands in any relation to the modes of production relevant its time.⁴⁵

In addition to perhaps being in some relation to the vernacular, the architect is unavoidably in direct relationships with known entities such as the clients (and their budgets), contractors, consultants, building product manufacturers, and other experts. In each project there is a range of

⁴⁵ Benjamin, Walter. Peter Demetz ed. "The Author as Producer." In *Reflections: Essays, Aphorisms, Autobiographical Writing*. New York: Schocken Books, 1986. pp. 220-238. And: Benjamin, Walter. Hannah Arendt, ed. "The Work of Art in The Age of Mechanical Reproduction." In *Illuminations: Walter Benjamin Essays and Reflections*. New York: Schocken, 1969. pp. 217-252.

alliances, groupings, and lines of influence among the entities (and the project budget). These alliances, groupings, and lines of influence have an ascertainable degree of detrimental or beneficial effects upon an architect's degree of creative success in each case. These alliances, groupings, and lines of influence occur within a quantifiable matrix of the structurally possible relationships that can occur within any building project.

The pages of Diagram 2.3 illustrate the complete matrix of such possible relationships in each building project. In any of those possible positions, architects must be allowed to execute their professional role, which is to inject creative activity into the objective relations that structure building activity. In other words, each profession, engaged in rational relations with others, maintains for itself a separate space where the judgments they will present to the others can first be subjectively selected. That subjectivity does not surface, so it is beyond the requirement of justifying itself to the others. In my opinion such a shielded space for subjective judgment is what actually defines any profession (such as law, medicine, engineering, and architecture). Under capitalism, the professional judgment is made, then presented, in the outside system of pervasive objective relations that structure any given design project. A professional must be enabled to compose buildings deemed rational by others, while the architectural idea of the building remains beyond the proviso of justifying itself to them.⁴⁶ This allows the architectural idea to be any, yet pass the many tests of others that idea endures in its objective relation to others.

⁴⁶ My argument here could be used as the basis for either the idea of "art for art's sake" or for *technocracy*: the rule of expert over business or cultural interest in all decisions. I am aware of the similarity of my argument to those two others that make a case for the autonomy of professions.

To some, my argument implies that professional autonomy means "good architecture" would be understood only by other architects. That is not the case. The critical distinction in my argument is that the "protected subjectivity" I am talking about is one that disappears as each profession brings its judgment out into the light of the objective relations that prevail in the arena of collaborative decision making. Also, the province of the client remains total.

The protected subjectivity I argue for is, ironically, more present in what are deemed less-creative professions. The idea of protecting subjectivity for architects is aimed at seeing to it that those other collaborating professionals, as incidental to winning various of the objective relations that prevail in collaborative building, no longer violate the architect's will.

Capitalism has an immutable drive to find the liquidity present in all quantities and qualities of human relations and things, to establish that equivalency required so they can be traded. The objective relations of building enhance the interchangeability of building products and services. Consider, for example, these early twentieth-century observations about urban capitalism by sociologist Georg Simmel:

While at an earlier stage man paid for the smaller number of his dependencies with the narrowness of personal relations, often with their personal irreplaceability, we are compensated for the great quantity of our dependencies by the indifference towards the respective persons and our liberty to change them at will. And even though we are much more dependent on the whole of society through the complexity of our needs ... and the specialization of our abilities ... we are remarkably independent of every specific member of this society, because his significance for us has been transferred to the one-sided objectivity of his contribution, which can be just as easily produced by any number of other people with different personalities with whom we are connected only by an interest that can be completely expressed in money terms. ...

The specificity and individuality of objects become more and more indifferent, insubstantial and interchangeable to us, while the actual function of the whole class of objects becomes more important and makes us increasingly dependent upon it.⁴⁷

Now with the utmost of pragmatism about the possibilities here, building products and services that make up a project can be produced “by any number of other people with different personalities with whom we are connected.” Creative design proposals are communicated to other building professionals who are involved in what is nowadays always “the collaborative process of building.” Consultants, contractors, construction managers, and clients evaluate the total work from the many objective vantage points of their professional expertise. Creative design proposals must emerge successfully from a series (if not a barrage) of objective tests. But each test can do anything from enhance to completely kill each innovative proposal. What is it

⁴⁷ Georg Simmel, *The Philosophy of Money* (1900; London: Routledge, 1990), 298, 301.

that makes the contemporary attempt to communicate an innovative design proposal so susceptible to either its enhancement or death? It is the inherent interchangeability of every part, including the design concept. (This is Tafuri's observation about the *Campo Marzio*, as well as Koolhaas's observation of architecture in Manhattan's urban grid in *Delirious New York*.) Everything is replaceable, with due cause that can emanate from anywhere. My point is that, if a subjective design intent is not even communicated to others, it cannot be terminated in the collaborative process. Like the intelligence of any other profession, a form of intelligence that actually assists architects to creatively produce for a sustainable career is one that carries itself with the blasé attitude of the information-rich in a complete money economy (who have seen it all, done it all, and answered all the boring questions).

The blasé attitude was developed long ago as a psychic response to interchangeability. This disposition is one that allows architects to negotiate, in a detached manner, the interchanging of components (building products and/or services) that they did not design and are not attached to in a subjective relationship. It does not mean there is no other place for communicating subjective feelings (i.e. design intent). It is simply that the construction documents, and the vast majority of the relationships and lines of influence in the Diagram 2.3 series, are not the place. The objective relations of building, where many entities work together, are generally referred to as the collaborative process of building, but it is a process I believe is defined more by conflict, and more relevantly addressed as such. Professional success requires there be a massive firewall erected between one's subjectivity (what one wants to get done) and one's objectivity (instrumental relations one must competently engage in to succeed). The rationale of the subjective is not at all required to transact any particular objective relations, or the lot of them. It is only with separation that all acts of creative construction (or destruction) occur. War is fought with complete isolation of subjective creative strategy from objective commands and movements. All corporate mission statements or agendas are completely subjective, but carried out through the most objective, instrumentalized methodologies known to them. Even legal judgment are subjective, but based on the citation of objectively existing precedent judgments.

There is an overwhelmingly psychological component to this, which is why I have introduced Simmel, and must also touch upon Freud. To inject creative activity into the objective relations

that structure building activity, there is a great need to treat others, and all parts dealt with, in the terms of their own objectivity.⁴⁸ The subjective act of design—aesthetics—can prevail if buried in the objective use of things. Of course this is schizophrenic.⁴⁹ It is also passive aggressive, nuanced, and appropriate to the capitalist political economy that surrounds it.⁵⁰ To handle design in such a way that you would force a radical and subjective conglomeration of objective uses of others' production back onto them, to force them to perform as they have already agreed to, without care for their opinions concerning the conglomeration itself, is the new form of power.⁵¹ Not only that, in the so-called collaborative environment that structures building activity, the simple bracketing out of one's aesthetic intentions when communicating project information to others has its precedent in the common practice of commercial entities bracketing out considerations of the environmental or social impact (or even the equitable impact among all its employees) from their own economic imperatives.

When an innovative architect brings forth an interesting new design project through some unusual combination of objective relations that make up the project, the results can range from the fully comprehensible to the eccentric. And Simmel has noted that amidst objective relations eccentricities function economically as “distinctions.”⁵² The use of eccentricities in one's style of decision making, for purposes of self-definition and obtaining cultural capital, are a developed form of existence in an economy based on interchangeability. I suggest that these distinctions are also one location of aesthetic expression in capitalism.

⁴⁸ At the turn of the last century, Adolf Loos embraced something similar to this protection of one's subjectivity in his aesthetics. See Benedetto Gravagnuolo, *Adolf Loos, Theory and Works* (New York: Rizzoli, 1982), 66–71. Also, that capitalism demands that the subjective basis of the creative rationale in building be protected, is, I think, also appropriate to an analysis of Frank Gehry. On some level his CATIA-based, model-scanning, CAD/CAM process provides his subjectivity that protection I am calling for in any practice.

⁴⁹ See Deleuze and Guattari, *A Thousand Plateaus*.

⁵⁰ See Michel de Certeau, “‘Making Do,’ Use and Tactics,” in *The Practice of Everyday Life*, 29–42; and Hebdige, *Subculture*, 130–140.

⁵¹ This parallels Tafuri's observation that the artist's use form is his “subjective reactions to the objective universe of production.” Manfredo Tafuri, *Architecture and Utopia: Design and Capitalist Development* (Cambridge: MIT Press, 1976), 90–91.

⁵² See Georg Simmel, “The Metropolis and Mental Life,” in *On Individuality and Social Form* (Chicago: University of Chicago Press, 1971), 336. Also on the same topic, see Thorstein Veblen, *The Theory of the Leisure Class: An Economic Study of Institutions* (1899; New York: Vanguard Press, 1922), 74–77.

The psychological component of my argument for what aesthetic success under capitalism means is essentially Freudian. Freud's discussion of what he calls the psychological misery of groups, in *Civilization and Its Discontents*, touches upon the various reasons why we cannot adequately evaluate or judge subjective motivations.⁵³ He points out that civilization demands a number of persons become united, to have a strength superior to one strong individual, and remain united against all single individuals. The strength of this united body is then opposed, as *right*, against the strength of any single individual. The individual is condemned as using brute force, or irrational behavior—subjectivity—if in opposition to civilization's *right*. Any rule that is set up must be obeyed by all, so that an equality of suffering is made apparent. The substitution of the convictions of a united number for the convictions of a single person forces the sublimation of instincts (a conspicuous feature of cultural evolution) upon the individual. Because of this, Freud fears the failure of leading personalities to gain the significance that should fall to them in the process of group formation. In order to enter the culture of a collaborative undertaking, potentially leading personalities put restrictions on their instincts, which in some silent way disables them. Freud sees this as one of the inevitable tradeoffs between personal satisfaction and group formation.⁵⁴

In collaborative undertakings such as producing a building, all merit, status, and gain must be based on objectively judged achievement. Initiative and individualism (i.e. innovation) asserted in ways not objectively quantifiable are in a sense penalized, since they do not adequately convince groups of their value, and fail to bring either cultural recognition or economic gain, or to bring a conceptual project—such as a design proposal—to its fruition: being built. If there is a failure to get a design concept built, we step back then to Marx and Engels's concept of historical materialism. A design concept that fails to negotiate its conditions of possibility, to become realized in built form, is in this sense not real. It is an ideology that may be thought, but is not “in effect.”

⁵³ Sigmund Freud, *Civilization and Its Discontents* (New York: Dover, 1994), 25, 48.

⁵⁴ Freud, *Civilization and Its Discontents*, 25, 43.

Freud does see many compensatory or coping mechanisms to satisfy oneself despite this condition of group formation, wherein failure to successfully negotiate an idea's conditions of possibility equals failure to be actually practicing the profession (of architecture, for example, which is about creating built work). One such way of coping, Freud suggests, is to heighten one's capacity for obtaining pleasure from mental and intellectual work. This is essentially to heighten one's satisfaction derived from paper (or virtual) architecture. Freud believes that the advantage of such intellectual work is that the intensity of its pleasure seems tempered and diffused, so as to not overwhelm one physically. Thus it can be a lifelong activity.

Be that as pleasurable as it may be, the mere image of a design is not itself compelling enough to enable the design through the steps of realization to built form. This problematic of the disconnect between a theory and its practice is theoretically analogous to Thomas Kuhn's description of how the social conventions of what he calls normal science evolve.⁵⁵ According to Kuhn a critical science may affect the working presumptions of the normal science, if its model, hypothesis, or discoveries are deemed compelling enough. Such compulsion engenders a scientific paradigm shift. In this theoretical analogy, the so-called paradigm shift occurs in architecture when an innovative idea is produced in a built form. In the case of both the science and the architecture, a mere argument against the conventions of normal practice is not itself compelling enough to engender change in the normal. Nor is it possible to dislodge the other professionals with whom one must collaborate, and perform their roles differently. An actual demonstration of some form of an alternative is required. In both the science and the architecture, to create an actual demonstration, tactics and strategies may be used that appear irrational from within the normal practices (i.e. unsanctioned experimentation in science, and incomprehensible uses for existing building products and services in architecture). These suspect acts are necessary so that the required demonstration occurs, so that a displacement of the normal takes place. And on a case-by-case basis, innovative architecture demonstrates that the use of a proprietary product or service outside its normal classification can be rational.

⁵⁵ Thomas Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1962).

To achieve this, the subjective and objective faculties are often split, for good reason, in the intricacies of the architect's professional and creative practice. Within the "capitalist individual" the subjective and the objective are in a dialectic. The more creative one may attempt to be in a field of one's choosing, the more borderline schizophrenic the dialectic may become. The pivotal concept is that when one's subjective work is built, it is inevitably "seen" by others, in that and other fields, and a work being co-opted is not a form of loss for the subject, but merely a sign of its creator's productive and active citizenship in a field.

Thus sustained architectural production under capitalism is more a style of decision making than any style of building. That style of decision making can be taken as a completely internal conversation—internal to the architect only, or internal to the architect and the cognoscenti of the field. This approach is meant to neutralize the impact of appropriation on creative production, while avoiding the homology of oppression versus resistance, and of objective relations versus subjectivity. The tactics of subverting expectations are deployable in aesthetic production, but without the self-deception that they are in any way a form of resistance to the capitalist political economy. They are not an aesthetic form of resistance because the economy is not any form of oppression of aesthetic production. A political economy is only a form of oppression against any alternative political economy.

Chapter 3

Criteria for Applications of Technology to Enable Architectural Production from a Position of Power Given Capitalist Relations

I. Introduction

“What we have to produce are people with tremendous technical competence who are able at the same time to put what they do in a broad perspective, to conceive of what they do not just as technical problem solving but as a social practice, as a cultural activity. That's an ambitious way of formulating it but if either side is missing, we've lost.” *Bill Mitchell, from Plan 37 (MIT, Fall/ Winter 1992/93).*

Since at least the 1970s, advanced architectural theory has also included design and computation scholarship: writing and research that connect architecture and design to concepts of digitalization, information technology (IT), the World Wide Web, computer software, virtual representation and modeling techniques, and to technical developments in computer-aided design (CAD) and the automated production of buildings (CAD/CAM).¹ And since about 1999—or the height of the dot-com economy in the

¹ Briefly, a chronology of publication highlights includes: Nicholas Negroponte, *Soft Architecture Machines* (Cambridge: MIT Press, 1975); William Mitchell, *Computer-Aided Architectural Design* (New York: Petrocelli/Charter, 1977); *ACADIA Proceedings*, annual conference proceedings, 1985 to present; Marvin Minsky, *The Society of Mind* (New York: Simon and Schuster, 1986); R. D. Coyne et al., *Knowledge-Based Design Systems* (Reading, MA: Addison-Wesley, 1990); William Mitchell, *The Logic of Architecture: Design, Computation, and Cognition* (Cambridge: MIT Press, 1990); ANY Electrotecture Conference, October 2, 1993, transcript in *ANY Magazine* 1, no. 3 (November/December 1993), 44–53; Yehuda Kalay and Gianfranco Carrara, eds. *Knowledge-Based Computer-Aided Architectural Design* (Amsterdam: Elsevier, 1994); Mitchel Resnick, *Turtles, Termites, and Traffic Jams: Explorations in Massively Parallel Microworlds* (Cambridge: MIT Press, 1994); William Mitchell, *City of Bits: Space, Place, and the Infobahn* (Cambridge: MIT Press, 1995); Nicholas Negroponte, *Being Digital* (New York: Knopf, 1995); Neil Gershenfeld, *FAB: The Coming Revolution on Your Desktop: From Personal Computers to Personal Fabrication* (New York: Basic Books, 2005); and

United States—design and computation theory in architecture has become increasingly sophisticated and increasingly contaminates architectural studio education and history, theory, and criticism proper. It is already a very common assumption, one I would not argue against, that it would be myopic to look upon computation and information technology in architecture as merely providing new virtual representation techniques or intelligent construction documents. Rather, the use of computation and IT in the production of architecture has brought about genuinely new architectural designs, construction techniques, and ways of thinking.

Generally speaking, I would describe one of the most prevalent approaches—both in studio education and in the production of renowned innovative architects using new technologies—as the use of computation technology to create both forms and a set of digital instructions for their fabrication that were not previously possible, or even thinkable.² Such an approach, which we have to admit is genuinely new, has been

International Journal of Architectural Computing (IJAC) 1, no.1 (January 2003) to present. (*IJAC* is a peer-reviewed print and online journal committed to deepening the understanding of digital systems for architectural design and technologies enabling their development. Published four times a year since January 2003 by the “Architectural Computing Alliance,” each issue is supervised by editorial board members from four of *IJAC*’s founding organizations: Education and Research in Computer Aided Architectural Design in Europe [eCAADe], Association of Computer Aided Design in Architecture [ACADIA], Sociedad Iberoamericana de Grafica Digital [SIGraDi], and Computer Aided Architectural Design Research in Asia [CAADRIA]. The journal is also supported by the CAADFutures Foundation. Those five, international, computer-aided architectural design groups—eCAADe, ACADIA, SIGraDi, CAADRIA and CAADFutures—make up the “Architectural Computing Alliance,” formed in 2002.)

The Association for Computer Aided Design in Architecture [ACADIA] was formed in the early 1980s for the purpose of facilitating communication and critical thinking on the use of computers in architecture, ACADIA’s focus is on the software, hardware, and pedagogy involved in design education. ACADIA members research and develop computer aids that enhance design creativity, rather than simply production. Members include educators and students affiliated with colleges and universities around the world, as well as professionals in design firms and the software industry. See: www.acadia.org.

² For a recent example of this approach in studio education, see Stu Hudson, “Paperless Architecture,” *Technology Review*, July 2005, http://www.technologyreview.com/read_article.aspx?id=14604. An example of innovative architects using this approach is Gehry Partners, LLP, which uses Digital Project (a sophisticated 3D computer modeling program by Gehry Technologies, Inc.,

brought on by the research and evolution of various digital technologies. Manuel Castells and historians such as Terence Riley and Hans Ibelings explain how one aspect of such digital advances is that many renowned architects' innovative practices had become the justification for the silent type of physical representation of space and program, as seen in the work of Steven Holl, Weil Arets, Herzog and de Meuron, and others, which they refer to as "ultramodern" or "supermodern" architectural styles.³ This neophenomenological project seems to be one of the representation of dematerialization or lightness. It builds the case that smoothness or formlessness or transparency is analogous to the lightness of the flow of digital work and information in the global economy. Castells makes the connection explicit when he writes: "the architecture that seems the most charged with meaning in societies shaped by the logic of the space of flows is what I call 'the architecture of nudity.' That is, the architecture whose forms are so neutral, so pure, so diaphanous, that they do not pretend to say anything." If architecture tried to say anything, Castells asserts that "the meaning of its messages will be lost in the culture of 'surfing' that characterizes our symbolic behavior."⁴

derived from CAD software created for use by the aerospace industry) to thoroughly document its designs and enable the bidding, fabrication, and construction processes.³ See Manuel Castells, "The Architecture of the End of History," in *The Rise of the Network Society* (Cambridge: Blackwell Publishers, 1996), 418–423. Also see Terence Riley, *Light Construction* (New York: Museum of Modern Art and Harry N. Abrams, 1995), 7–32; Hans Ibelings, *Supermodernism: Architecture in the Age of Globalization* (Rotterdam: NAI, 1998); *Architecture* 86, no. 10, "Euromodernists" (October 1997), 83. Also, for a discussion of some of "the architecture of nudity" without a completely uncritical embrace, see Ignasi de Solà-Morales, *Differences: Topographies of Contemporary Architecture* (Cambridge: MIT Press, 1997). As an aside note the dissatisfaction with this expressed by Greg Lynn: "There is no reason to settle on an aesthetic of silence, or a "strategy of dematerialization... A representational project [that] seems to be one of invisibility."—the argument Greg Lynn made from the audience during the ANY Electrotecture Conference, October 2, 1993, in *ANY Magazine* 1, no. 3 (November/December 1993), 51.⁴ Castells, *The Rise of the Network Society*, 420. On pp. 385–386 Castells does make clear that his view of the spatial rearrangements brought on by digitalization is actually more nuanced than the silent representations in the architecture of nudity. To him, the new space of production is not only significant because it has become decentralized. That has been happening for some time. Digitally rearranged practices do not refer to a new place, placelessness, or stealthiness, but to a process, characterized by both precision and flexibility in the fabrication of things, and by the technological and organizational ability to coordinate and bring things back together. The process allows dispersed and separated production processes to be brought together just long enough for the moment required to

Even without Castells's, Riley's, or Ibelings's theorizations to back up the methodologies employed, the fact remains, even for theory-adverse architects such as Frank Gehry, that the computer hardware we now have provides the means of "performing" a digital design file in a variety of ways: as a 3D model on a computer screen, as well as the full-scale building component itself.⁵ Following the analogy of the musical score or film script, today the digital design file is a description of a work of art. It can specify various types of representations, or performances, in architecture, such as its representation as a rendered model on a computer screen; its printout on paper; or its three-dimensional scale model. The quality of these performances has been escalating. That is, perceptible improvements have moved through two- to three-dimensional representations; through increasing degrees of realism; through virtual toward solid model production; through rapid prototyping to the programming of milling and cutting machines that yield full-scale building components. There is a logical crescendo to this. It is not some perfected virtual presentation, but it is the "direct" performance of the real building itself from the digital design file, or "script."

In other words, the thrust of innovative production using digital scripts representing a work of architecture aims toward the construction of buildings directly from them. For example, the CAD/CAM techniques by which the digital script controls a machine that physically generates the building or building component are much appreciated in the recent work of Frank Gehry. The production of his Disney Concert Hall in Los Angeles and his Guggenheim Museum in Bilbao are by now visual as well as theoretical icons of this achievement of computation in innovative architecture. In the case of Gehry's work a triple-axis camera is often employed to measure his cardboard design models of complex building designs that could not be readily drawn. Further design and manipulation occur in a CAD system (called Digital Project in Gehry's office, a

produce a product, a project, a sale, or a building.

⁵ A clear, conceptual description of this precept was given early on by William Mitchell in "Picture This. Build That: Algorithms, Machines and Architectural Performances," *Harvard Design Magazine*, Fall 1998, 8–11. Also see Michael Dalrymple and Michael Gerzso, "Executable Drawings: The Computation of Digital Architecture," in *Acadia98*:

sophisticated modeling program by Gehry Technologies, Inc.). At any time, the design model can generate two- and three-dimensional drawings, or can be “performed” as a new scale model by a computer numerically controlled milling machine. Finally, the design model can generate scripts to program other milling and cutting machines, such as water-jet stone cutters, that yield the full-scale building components. What does this prove? The specific advance in the case of Gehry’s work is proving that these techniques (commonplace for some time in the automotive and aeronautic industries) are feasible in architecture.

But is the biggest problem for architects getting extremely complex shapes input into the digital, so that they can be built? Perhaps that is the most pressing concern for Frank Gehry, or Sir Norman Foster, and for the designers of aerodynamic objects such as cars and planes. But if that were the most pressing problem for all architects, the chief focus of practice would be competition among architects themselves in that particular method of digital script making to manufacture building parts. What that would reveal is that many compete to be small-scale Frank Gehrys. At best, those “middle-garde” architects would be able to design with last year’s triple-axis toys. (Perhaps for most it would mean playing with last *decade’s* toys, given the price of this technology. And such competition would result in many poor man’s Gehrys creating mere mock-ups—smoke and mirror, nonfunctioning, science fair prototypes and images of the technology-enhanced architecture Gehry was able to do last year.) A truly digital architectural practice won’t emerge from the work of one innovative leader with the rest using yesterday’s tools, because architects don’t essentially compete with themselves. With the digital tools they continue to compete with “others” (others as defined in Diagram 2.3), the nonarchitects in the field of building production.

As digital scripts for building objects become ubiquitous, they are generated for many discrete building parts by many other entities in the field. These entities have always been able to produce complete, functioning buildings without an architect. Information technology enhances their skills, so that in the eyes of more and more clients, their output

directly competes with that of architects. Consideration of the significant competition coming from all other makers of digital scripts for buildings and building components is the central concern of this chapter's consideration of technology to enable architectural production from a position of power given capitalist relations. This chapter's premise is that a devastatingly better IT-enabled practice would mean architects' businesses were enhanced (money was made) while their creativity became less critiquable by others (remained the trade of architects).⁶

As long as the building of space requires or benefits from a generalist orchestrating it—and there is no reason to believe it won't, even in a digital world—that orchestration will be the architect's defining role. For example, from the most primitive technological representations of things—from simple information such as reference materials, specifications, samples, menus, charts, diagrams and even verbal descriptions of a product or space—architects visualize complete designs. Architects are those who can imagine spatial ideas three-dimensionally, even when they exist only as symbolic representations: diagrams, sketches, or intelligent digital models for a design. Bringing a complete appreciation of symbolic representations to be executed as full-scale buildings is still an exclusive skill of architects. None of the IT tools developing in the building professions have taken this away. And even the studio education process continues to impart this skill.

⁶ My argument here could be used as the basis either for the idea of “art for art's sake,” or for technocracy: the rule of experts over business or cultural interest in all decisions. I am aware of the similarity of my argument to those two others that make a case for the autonomy of professions. To some, my argument begs the question of whether professional autonomy means “good architecture” would be understood only by other architects. That is not the case. The critical distinction in my argument is that the protected subjectivity I am talking about is one that disappears as each professional brings his judgment out into the light of the objective relations that prevail in the arena of collaborative decision making. Also, the province of the client remains total. The protected subjectivity I argue for is, ironically, more present in what are deemed less creative professions. The idea of protecting subjectivity for architects is aimed at seeing to it that those other collaborating professionals, as incidental to winning various of the objective relations that prevail in collaborative building, no longer violate the architect's will.

To retain control over the visual organization of the environment in a digital world, custom-designing one form of discrete production, such as digital design scripts and CAD/CAM production, or custom-learning a discrete expertise, is trivial compared to the creative task of manipulating and combining the production of others. Architects cannot afford to compete based on discrete expertise that is already executed intelligently and made available digitally by “other” people. Architects remain those who orchestrate the total spatial work, which still requires the discrete objects, products, and expertise being developed and redeveloped daily by others (see “Others” as defined in Diagram 2.3) as nonarchitects in the field of building production.

But the architect’s design alternatives and solutions have to be communicated. They have to be drawn, at present, as digital files. Problems arise, for all others involved in building, when the architect’s offered design solution lacks any intelligent moorings to the objective concerns of others (such as indexed construction costs, product availability, or known products and structural systems that are applicable, to name three objective concerns of others). Architectural design development, even as digital as Frank Gehry’s process, is a black hole, where myriad decisions can only be imagined to have fired through the mind of the designer. The designer’s results come to others all at once, but with hardly any intelligence or editability, in the digital sense of those terms, as we are now to understand them. As such, even the digital design development process is open to criticism that it is done in an IT vacuum.⁷ For example, in Gehry’s methodology all IT is generated from his design models as originals. The intelligence is essentially triple-axis scanned into digital format from his one-of-a-kind sketch models.

But the collaborative practice we see in the field of building (as analyzed in chapter 2) takes into account the condition that under capitalism, building IT comes from everywhere, all at once. No relevant solution can be ignored. It is not relevant to insist

⁷ That the design development process should not occur in an IT vacuum is also argued by Yehuda Kalay. But he is in favor of bringing all the architect’s semantic rationale into the IT-enhanced building model shared with others. See Yehuda Kalay, “P3: An Integrated Environment to Support Design Collaboration,” in Anton J. Harfman, Peter Jordan, and Bettina Mehnert, eds., *Acadia 97: Representation and Design* (Association

that “architects should draw, and draw first.” It is nostalgic to believe that architects generally conceive even the schematic layouts for their best works. The answer is that “anyone—it does not matter who—can begin, and generally already has.” On all but the smallest jobs someone else always already has drawn, or specified first.⁸ Whatever existing solution is closest to providing a full-service answer will be made digitally available to the client anyway. In the end, the simple, the ugly, or the obvious answer will get the job, if the client has a mind for it. The obvious solution is presented as ubiquitously as the radical one. No architect, or technology, can make an Edgar Kaufman out of a Sam Walton as a client. The client’s access to the obvious solutions cannot be kept at bay while architects’ drawings are “finished.” In digital documents, architects fool no one by insinuating their own production (whether digital or not) over the production of others. Every digitized building solution is predestined to be known by all.⁹

The ready-made, full-service answers of others have to be integrated into the architect’s design only because they cannot be concealed from the client. As a result the architect’s burden is to incorporate the obvious answers, or at least make it known that he had considered them, early in the process. Design in a digital world cannot carry on in such a manner where dissenting opinions are squelched. Like freedom of speech (or—less

for Computer Aided Design in Architecture, 1997), 196.

⁸ Although the text here discusses architects primarily as “the drawers of plans,” that is to focus on the point at hand. I am aware that for most projects the building program, spatial relationships, the present state of conventional business practices, and some other chosen consultants usually outline project information first. In fact, I have detailed this process elsewhere, as concerns the building of Las Vegas hotel-casinos. See “Las Vegas Today—Rome in a Day: Corporate Development Practices and the Role of Professional Designers,” *Journal of Architectural Education* 54, no. 2 (November 2000), 68–79. When the client begins, for example, with in-house conventions of space programming, accepted real estate practices, or structural systems that will limit the scheme, an architect may or may not be in the initial group of project planners. Most malls, hotels, commercial centers, or transportation-related buildings, to name four examples, do not begin with an architect drawing anything at all. The case remains that IT must work for the architect to make professional (aesthetic) judgments completely in sync with whatever information is already in the pipeline.

⁹ For example, roofing and siding manufacturers (to name two) make discrete finished products with certain textures, attributes, specifications and detail drawings already fixed. When represented in digital files they become known quantities to everyone in the building process.

polemical—like consumer choice),¹⁰ the digitally enabled freedom of building solutions today implies that architectural dictators lose their jobs. What I would call the management of choice is the paradigm of aesthetic innovation suited to the capitalist relations that define the form of digital collaborative practice we see in the field of building. Whoever can orchestrate design solutions with radical creativity, while meeting the objective criteria demanded by the other collaborators in the building project, will remain what we have always called architects: the most creative manipulators of built spatial ideas.¹¹

II. On Psychology, AI, and Modeling Intelligence

The psychological component of my argument also has a close connection to the way computational tools are deformed by the pressures of the capitalist political economy in which they are developed. My view on the role of the architect is similar to developments that once paralleled each other in psychoanalytic and artificial intelligence (AI) research. To be clear, psychoanalysis and AI construct models of the mind. I am constructing (in Chapters 2 and 3 in this dissertation) a model of practice in the field of building under capitalism, where many entities work together, in what is generally referred to as the collaborative process of building, but which I believe is defined more by conflict, and more relevantly addressed as such. Therefore, where psychoanalytic and AI research ask “Where, exactly is intelligence (or meaning) in the model?” I ask: “Where is the intelligence in a model of the collaborative building process?” I ask this in order to see how the architect can be the entity that has it, since it is my view that architectural intelligence under capitalism resides solely in the management of interpretations of the aesthetic value of what is being produced. I aim to see that digital tools are developed to enable the possession of that intelligence as the trade of the architectural profession. With

¹⁰ Rachel Bowlby, *Shopping with Freud* (New York: Routledge, 1993), 2: “the ... irony of this does not alter the fact that consumer choice has become the paradigm for ethical and political choice.”

¹¹ My argument here, as in Chapter 2, Section V, could be used as the basis for either the idea of “art for art’s sake,” or for a technocratic aesthetics: the rule of aesthetic experts over business interest in all decisions. See Chapter 2, Section V for the fuller development of this point.

that in mind, the following describes where the psychoanalytic and AI models of intelligence are relevant to the effort to develop such digital tools:¹²

In psychoanalysis after Freud, object relation theorists began to describe the mind not as persistent, but as a society of inner agents—suborganizations capable of generating meaning and experience. What these theorists think of as the self was seen to emerge from their negotiations and interactions. Psychoanalysis “inspired by Jacques Lacan went even further. Lacan viewed the idea of a centralized ego as an illusion. For him, only the sense of an ego emerges from chains of linguistic associations that reach no endpoint. There is no core self. What we experience as the ‘I’ can be likened to something we create with smoke and mirrors.” As psychoanalytic theory has moved away from a centralized model of meaning and the self, AI, too, has moved from a centralized to a decentralized model of mind. For example, by 1985 leading AI theorist Marvin Minsky’s model of intelligence, in *The Society of Mind*, was based on objects and emergence. In this model, a tremendously large number of agents each have “only a limited point of view.” That is, thought or intelligence, as well as complexity of emotion and behavior, emerge from the mind as a result of the interplay, interaction, and negotiation of the various agents. Here intelligence does not *follow* from rules programmed between them, but *emerges* from the interplay of agents with opposing views. Minsky’s AI “model has a natural affinity with object relations psychoanalysis,” and is also in agreement with the “decentralized mindset” popularized in the 1990s by the work of MIT educational researcher Mitchel Resnick.¹³

While both psychoanalysis and AI moved toward a model based on objects and emergence of intelligence during the 1980s, psychoanalysts were initially uneasy with the AI researchers making what appeared to be too simplistic reinterpretations of concepts. For example “Freudian slips” are taken as “data processing errors” in AI. But this

¹² The following exposition quotes and paraphrases from Sherry Turkle’s lucid account in *Life on the Screen* (New York: Simon and Schuster, 1995), 136–148.

¹³ Minsky, *The Society of Mind*; Mitchel Resnick, “Beyond the Centralized Mindset,” *Journal of the Learning Sciences* 5, no. 1 (1996), 1–22, and Resnick, *Turtles, Termites, and Traffic Jams*.

reinterpretation, under emergent AI (not information processing AI), is considerably valuable (and has become appreciated by psychoanalysis). Freudian slips (parapraxis, or slips of the tongue) are assumed to tell us about people's wishes. Their analysis lays bare inner emotions, as a window onto the personality, its conflicts and history. In the AI interpretation of Freudian slips however, only a "narrow determination" is made. An analysis of any "slip" does not call the whole person into play. AI sees a slip as an error that can be as simple as mistaking or miscoding a "plus" sign for a "minus" sign. This is common in accounting and in data streams, where it is natural to code opposite terms by the same "root" word, but place a different sign bit preceding it (for example: hot is coded and stored as "-cold"). If a man mistakenly says "She is cold," when that woman referred to is clearly sweating and standing under the noonday sun, the slip does not tell us the speaker's inner, or mixed emotions about her, etc., but is a simple technical matter. If the mind stores information like a computer, occasionally substituting "hot" for cold is easily explained. Understanding the speaker's slip requires no recourse to inner feelings or wishes. Someone listening to the speaker can hold a blasé attitude towards his slip, and act as if the woman is "hot," which she is.

What this tells me is that if the collaborative building process really is like models based on objects discussed here, the architect is the primary entity that stands to reap the benefits of having the "slips" interpreted both ways: that is, as both the "window to inner meaning" of psychoanalysis, and the "narrow determination" of AI. The fact that this is absolutely critical is shown in the following example:

An architect intentionally requests his collaborative peers—a building products manufacturer of prefabricated ticket booths (such as those used in football stadiums) and a structural engineer—"to install a certain model of prefabricated ticket booth as an enclosure, and to engineer a floor to support it, respectively, for a high end residential project." This request can easily be interpreted by the engineer and the manufacturer as a "slip," a mistaken specification. A possible justification could be that the architect meant to say the work was "for a high end football stadium project." That would indicate a mere technical (AI) slip. Or, the slip could be believed to reveal a deep, inner conflict

existing in the project as a whole; that placing a ticket booth in a residential project is indicative of a meaningful discrepancy.

Nonetheless, both parties (the manufacturer and the engineer) can operate (and despite any views they might hold that the architect is malfunctioning). The engineer can proceed to design a floor to support a ticket booth even if she feels the ticket booth is so incorrect as to be an actual error. In this technical realm she has the prerogative to use only the relevant data, in the shared CAD model for example, that describes the ticket booth for her discrete purposes (its weight, load, size, and so on), so that she can provide the agreed-upon service—the floor design. The engineer can do this, despite never coming to certainty about whether the ticket booth is really going to be a ticket booth (or whether the residence is really a residence).

The manufacturer of the ticket booth can also operate, and under various interpretations of the architect's so-called slip. The manufacturer can provide the ticket booth as an object, and guarantee its performance, by gleaning all the relevant information that affects the placement and performance of his product from the same digital project model all the project collaborators share. Any data that refers to the unusual residential context, but which he deems will not affect his ability to provide the specified ticket booth, he has the privilege to ignore. Other choices the manufacturer has include increasing the cost or delivery time of the object because of the unusual context, or declining to provide the object altogether. The architect is also free, then, to seek similar objects from other manufacturers (which objects, as Georg Simmel expressed it, "can be just as easily produced by any number of other people with different personalities with whom we are connected only by an interest that can be completely expressed in money terms").¹⁴

The intelligence in the above model of collaborative production resides in the management of interpretations of the value of what is being produced. Only that management brings about complex relationships, behaviors, and intelligence from the self-interested actions of discrete agents involved. The privilege of the architect in the

¹⁴ Georg Simmel, *The Philosophy of Money* (1900; London: Routledge, 1990), 298.

model is the privilege of interpretation. Any building product or professional service provided by others can be arranged so that its interpretation can be any—sublime, mundane, ironic, beautiful, or odd and out of context. Its interpretation can be that it is art. The various interpretations available are not simply a postmodern narcissism, or shallow pastiches of capitalist production, but models of thinking creatively in consumer culture, amidst the structural relationships that prevail in each building project (and wherein the meaning of the aesthetic is revealed). There is only a limited complexity available to the curtailed world view of each agent called upon to provide its building product or service in an expected way. In fact, when each service or object is employed in its usual manner, for example, as per its usual CSI classification,¹⁵ there is no system complexity or intelligence to speak of.

All other collaborators may make, for themselves, judgments and interpretations as to just what is going on, and just what signifies what, but, upon providing their building product or service, they have no obligation to make any judgment at all. The entity concerned with the overall combination of interpretations and effects—the overall intelligibility of effects—would, logically, be an architect. In the making of a building, the architect and the client are the only entities expressly and contractually obliged and interested in just

¹⁵ I use the term “CSI classification” to refer to the dominant method of building object, system, and assembly classification in the US, fully aware that the method is not so straight forward, and has an interesting postwar history. But that is the subject of another large discourse. The Construction Specifications Institute (CSI) continues to develop both the UniFormat and the MasterFormat classifications. UniFormat is for general specifying of building elements and assemblies during preliminary design, and MasterFormat for detailed specifying of building materials and products during final design and construction documentation. (See *CSI/CSC UniFormat: A Uniform Classification of Construction Systems and Assembles, 1992 Interim Edition for Building Construction* [Alexandria, VA: Construction Specifications Institute, 1992], 11–14.) Computational building object databases, their usability and searchability are of paramount importance. The CSI’s UniFormat and MasterFormat have similar organizational and searchability limits that need to be overcome in the same way. (This holds true for the SfB and AIA CAD Layer classification formats as well. Although some believe those hold more promise than either CSI classification format, the fact is none hold any more promise than the other.) I use the shorthand “CSI classification” here not because I feel CSI is the closest to being a usable classification scheme, but because all classification schemes are flawed in reference to creativity (and the decentralized mindset). This entire matter is addressed in the subsection “Decontextualization” in section IV of this chapter.

what sort of intelligence emerges from the overall effects of the interplay of objects, entities, and views.¹⁶ If the emergence model of intelligence really is intelligence, then it is my view that the intelligence resides in the management of interpretations of the aesthetic value of what is being produced, and that the intentional production of such value is the aesthetic act.

III. Software Applications That Deal with Architectural Practice as a Process of Dispersed Collaborative Decision Making

Many conceptual proposals for software applications have been generated to deal with architecture as a dispersed collaborative decision-making process. The concepts generally address the pulling together of the expertise of clients, consultants, architects, and manufacturers; the management of tradeoffs, conflict detection and resolution, and the integration of various subsystems into a whole building. To address these collaborative concerns the software generally makes more timely and efficient the inclusion of objects designed by each professional into the digital model of the building everyone shares. Various software tools have been developed to enable concurrent access to databases, and provide up-to-date information to all parties involved.¹⁷ Generally work in the this area implies the existence of an intelligent CAD project model, or building information model (BIM), as a central repository of project information that everyone involved is allowed to access or share, and to add or extract products and information.

In the rapidly changing field of proposals that deal with such issues, one of the most comprehensive computational design environments conceived expressly for architects seems to me to have been the P3 concept by Yehuda Kalay, Beatrice Benne, Lachmi Khemlani, and Anne Timerman of UC Berkeley.¹⁸ Although developed quite some time

¹⁶ Of course, individual entities have some long-term interest in the intelligence of the overall effect, to the extent that it determines how others view their production. If their production is viewed in a positive light, it may continue to sell, as a result of its use. If their production is used in a new way successfully, they can profit from the new venue for production, even though it was discovered “for” them, by someone else.

¹⁷ See Kalay and Carrara, eds., *Knowledge-Based Computer-Aided Architectural Design*.

¹⁸ Kalay, “P3,” 191–205. The concepts described in this article seem to draw on the work

ago (in the early 1990s), the P3 concept remains worth discussing as a convenient entry to various topics here. This is because, like many software proposals, P3 employs a global database of objects used in conjunction with a project-specific database, which is the digital model (or BIM) of the building everyone shares. For P3, an intelligent global database of objects is one that contains building products and services in multimedia form with their attributes and constraints attached as data. An intelligent global database is at first a collection of web pages of manufactured objects for building.¹⁹ But when the information provided by manufacturers is made compatible with the digital model of the building everyone shares, building products and services data carried on the web can be inserted directly into the building model. The model can link all the components used to the appropriate assemblies in the building. All professionals involved can “read” the attributes embedded in each object, and can run their own evaluations of the building design relevant to the expertise they are to provide for the job.

For Kalay et al., among the big advantages of global object databases generating the digital model of the building everyone shares are: that the model can be built up quickly, and that all parties involved can run their own, expertise-relevant evaluative tests on the same model in a more interactive and open design development process. Since the model is digital, and accessed asynchronously, various evaluations and revised input of different parties can be taken into account faster, while it still counts, that is, during the design phase, while action can be taken by the others on the model in response to design developments.²⁰

But Kalay et al. do not stop there. They believe design proposals made by each professional must also carry the semantic “why” rationale—the reasons for being proposed—in addition to the syntactical information—the data—so that the “various specialists will have a better understanding of the reasons behind the decisions” of others,

of Kalay, Beatrice Benne, Lachmi Khemlani, and Anne Timerman in their article “Semantically Rich Building Representations,” also in *Acadia 97*, 207–227. So, when I speak of “P3” here, I will reference concepts expressed in both articles.

¹⁹ Kalay et al., *Acadia 97*, 199–200, 212.

²⁰ Kalay et al., *Acadia 97*, 203, 224.

and will “generally help make decisions that are in tune with those made by others.”²¹ Their strongest conviction is that all the semantic rationale of each party’s evaluation or revised input should be transmitted back into the model that everyone shares for all to see and judge for themselves. For Kalay et al. the crucial element required to make collaborative design more intelligent is that the model everyone shares be “semantically rich.”²² They believe that solves the central problem remaining in collaborative design: sharing information while design ideas are being formed, rather than after they have been formed.²³ Since they view all of building design, from evaluations of thermal performance to questions of appearance and function, as decisions that carry intentions and judgments that should be shared, P3 is designed to potentially make available the semantic content of every decision.

In describing P3 Kalay et al. go deep into questions of evaluating certain intangible concepts. For example, with the well-meaning intention of “tracking issues through the design process,” they propose an “issues database.” The issues database would do things such as map satisfaction so that the designer could present to the client “the summation of weighted, normalized satisfaction ... as the overall performance of a given design solution.” “In fact, an algorithm can be developed that provides hints to the designer” in identifying needs that are not being satisfied or are oversatisfied. “It is possible, therefore, to seek a design solution that better achieves the under-satisfied needs, while achieving less-well the over-satisfied needs.”²⁴

In another example, the focus on providing semantic richness in the computational environment forces Kalay et al. to confront the conundrum of the space-structure dilemma of representation in CAD. (This is a much picked-on aspect of CAD modeling. The more it gets picked on, the weaker CAD seems to be, although to me the so-called weakness has no harmful effect on the design of buildings.) With CAD, the fact is that

²¹ Kalay et al., *Acadia 97*, 196.

²² Kalay et al., *Acadia 97*, 196.

²³ Kalay et al., *Acadia 97*, 196.

²⁴ Kalay et al., *Acadia 97*, 201–203. Kalay et al. also believe it is possible to represent design intent explicitly so that the desirability of design proposals can be debated.

only “structure” is explicitly represented. Only objects are “drawn,” and as a series of lines, planes, or points. Any notion of “space” is only implied. The CAD system doesn’t “draw” space at all, it only draws (represents) objects. Any notion of the space “inside” a room or object, or the space “around” a building, is your own perceptual construct. Nonetheless, Kalay et al. want to see space and structure put on equal footing in P3, primarily because much semantic rationale exists in just how the designer is conceiving of the “space” between the objects used. The thought model of the computational environment demands that semantic spatial intentions be made apparent, so that the others can see them too.²⁵

We are all aware that software already exists through which each discipline makes its own evaluation of what needs to be done, from its own point of view. At present the decision-making rationale of each discipline is only embedded in the separate, specific software used to make its own evaluation of the building in question. Discipline-specific tools, such as structural analysis or thermal performance software, while loaded with sundry rationales, only issue the product of their evaluations back into the building model everyone shares. Kalay et al. believe that such building models are faulty because they include “only the results of design decisions made by each one of the participating disciplines, and none of the reasons for making them.”²⁶ For them, collaborative design cannot rely on the private products and separate evaluations of the various collaborators being merely inserted back into the shared model of the building.²⁷ The P3 software concept brings the rationale of the evaluations made by each professional into the building model so that the various specialists will have a better understanding of the reasons behind any decision.

P3 seems to fully address the problem of the loss of intelligence that digital building models undergo, as a result of various consultants running their numbers on old versions of an evolving design, or using default values for building components that the architect, or someone else, never intends to use. The problem is epidemic, and is addressed

²⁵ Kalay et al., *Acadia 97*, 216–217.

²⁶ Kalay et al., *Acadia 97*, 197.

correctly by the linking of usable object databases to the building model everyone shares. Kalay et al. meet their goal of enabling various consultants' discrete evaluation programs access to a more accurate building model.²⁸

When Kalay et al. posit that “the major outstanding question is how the design process itself will be affected by the provisions” of P3,²⁹ one possible answer is that it will surely result in more accurate and buildable schematic plans being generated. Early plan evaluations can appraise overall costs, life cycle expense, user needs, and thermal, structural, or other performance criteria to a level of precision that should make any client comfortable. If the design schemes are the invention of an architect, then it will certainly give architects the ability to create more buildable ideas faster.

Problems with Semantically Rich Computational Environments. The P3 concept is illustrative of a general epistemological agreement in design and computation theory that what is required in computational environments to support the qualitative aspects of architectural design is information semantically meaningful to everyone involved.³⁰ To meet that requirement, software designers must go to tremendous lengths to make the building information model, CAD, each object model—and any data structure used—so meaningful. The arguments I have made throughout this dissertation, however, particularly the discussion of interchangeability in capitalism and the analogy to the concept of decentralized thinking from AI research, go against the epistemological assertion that semantically rich computational environments are required to support innovative architectural design.

For example, I have already shown that under capitalism the various specialists involved in building are under no obligation to make judgments outside their expertise, or to give the rationale for their own decisions to others. Kalay et al., like many, are not ignorant of

²⁷ Kalay et al., *Acadia 97*, 198.

²⁸ Kalay et al., *Acadia 97*, 224.

²⁹ Kalay et al., *Acadia 97*, 204.

³⁰ Kalay et al., *Acadia 97*, 208. Kalay et al. assert there is general epistemological agreement, and I have found it asserted widely as well, in research papers in *The*

this fact, they only make the observation that they wish the facts would change: “unfortunately, different professionals have different world-views” and “our legal system and litigious society encourages limited risk taking and staying within the bounds of established professional knowledge and practices.”³¹ The hard fact remains that for all the collaborative semantics, software concepts that aim to construct semantically rich computational environments do nothing to force anyone to break out of those established bounds. The benefits of a “mutual understanding of intentions” in building design are to my view illustrative of wishful thinking vis-à-vis human psychology and the present set of capitalist relations in the field of building.

As I mentioned earlier, the routine withholding of intentions and the continued isolation of professional world views that distinguish the current state of capitalist relations in the field of building do allow the qualitative aspects of architectural design—aesthetic concerns—and without the communication of semantic rationale and judgments. In fact I will go so far as to say that the inclusion of the judgments of others, as per the epistemology of semantic richness in computational environments, does not in itself provide the necessary conditions for technology to enable architects to frequently produce innovative design proposals. While concepts of semantically rich software may ensure that architectural proposals will be more feasible, they do not present more options for innovation, particularly for the type of innovation that stems from the management of choice in building—which is the realm of aesthetics under capitalism. The remainder of this chapter is a review of specific areas that require work computational environments, to enable architects to frequently produce radical design proposals.

IV. Digitally Enhanced Architectural Practice: Where the Work Is

Design technology should enable architects to frequently produce innovative design proposals while at the same time ensuring that those proposals are feasible.³² As

International Journal of Architectural Computing (IJAC) and Acadia Proceedings.

³¹ Kalay et al., *Acadia 97*, 193–194.

³² While such a tool offers subversive possibilities for the innovative designer, at the same time it is a streamlining, profit-generating tool for the conservative designer. Or,

mentioned, digital project models should not institutionalize the exposure of the architect's subjectivity to the objective relations that dominate in the reception of those models. Any computational design tool should maintain a space where the judgments architects will present to others can first be subjectively selected and evaluated on the same model to be shared by everyone in the collaborative process. Most semantically rich computational environments that operate with building products and services that can be inserted into a shared project model, or BIM, can create that separation, if the semantic information is *removed* from them, so architects can evaluate their own design proposals in the computational model before "showing" the results to anyone. Given, then, that communicating the semantic content is not critical, I will now discuss other obstacles. These are related to the building model's content and organization, and searchability/usability issues intrinsic to a computational environment for innovative architecture. I will discuss three specific areas: selling (incorporating the manufacturer's and consultant's insatiable drives to sell, within their limited range); visualization (overcoming disjointed and estimated [default value] objects); and decontextualizing needs (overcoming the limitations of software agents and the existing semantics of the CSI classification of building components through a decontextualizing metalanguage for exchanging the existing production of others).

Selling: Incorporating the Manufacturer's and Consultant's Insatiable Drives to Sell. Economic gain motivates the manufacturers of discrete building products and services to insert them into computational environments. From the point of view of consultants, construction managers, and manufacturers, an intelligent computational environment accommodates the desire to have their products and services seep directly into the design development process. The burden to provide their own intelligent digital files with embedded product attributes and 3D representation in an exchangeable format is compensated by actual sales and the benefits of all types of digital marketing that can only be executed in a computational environment. The actual sales occur as a result of products being more obviously selected and designed with. The digital marketing tracks

interestingly, it can offer profitability to conservative design in certain projects, as a way of subsidizing efforts toward radical design in others.

the use of objects, user inquiries and history, and can be used to project need. Both tactics, actual sales and marketing, create new work, and allow the makers of discrete building objects to assert the virtues of their production more generally.

In the computational environment architects, by contrast, have a variety of needs that become very specifically defined but are still not predictable. Predictability in the computational environment can be precisely defined as the use of the production of others within its dominant form of classification—at present the CSI classification (the Construction Specifications Institute MasterFormat and UniFormat) systems. It is important to recognize how, when not acting predictably, architects do control the production of others. The others' push to sell is mitigated by the coy (by comparison) actions of architects, by the seduction of what are essentially “architect-presented” opportunities to sell.³³ With ubiquitous IT, a default value that represents a manufactured product in a design cannot be hidden just as an upgrade or respecification desire by the architect cannot be hidden. The default specification is controlled by the owner's/architect's lack of satisfaction; the open specification is controlled by the others' competition to fill it. The budgetary balancing act of default vs. upgrade opportunities are not controlled by the others but by owners/architects, through the same IT everyone uses on the project.

The drive to sell can be introduced like a tonic to design needs or void areas in a project that architects desire to experiment with in that way. However, it is only through instilling in others a confidence in multiple, feasible selling opportunities (emanating from the computational environment) that building product manufacturers and service providers will allow their offerings to be so managed. The project model, or BIM, then, has only one form of content: the existing production of others. It is not critical that architects should develop or provide any data content themselves, or alter any content emanating from others in ways the others do not agree to produce. Manufactured production limits design of discrete things by architects. Discrete custom design by architects kills off manufacturer participation in the digital project realm. Tied to this is

³³ The architects/owners play the classical female role, the others the male.

the discussion that follows on the enhanced capabilities of 3D visualization of the disjointed production of others. But it can be pointed out now that greater visualization of all the production of others can only evolve from the broad establishment of confidence in selling to the architect. It is only through the solid establishment of such confidence that manufacturers will allow their products to be so consistently shopped, clothed only in their relevant product attributes, and so thoroughly three-dimensionally viewed, inspected, and tested.

Visualization: Overcoming Disjointed Production, and the Default Value of Objects.

As opposed to the benefits Frank Gehry reaps by having his ideas built more readily than they could be drawn, for most architects the reverse case would be the most useful: being able to create something new from that which is already drawn by others. Architects need to see many things that are already built as things that might work. Computational environments make this obvious when the defaults are visualized. They are there now anyway. The real trick is gaining a heretofore lacking 3D visual access and control over the production and its interrelation. Architects must “see” where the problems and innovative juxtapositions and combinations lie, and acclimate to seeing them for their own style of decision making.

Despite being exchangeable, and despite their neat CSI classification into rational divisions, proprietary building products and services are completely unrelated to each other. Each producer strictly demarcates their responsibility and liability at the borders of their production. One implication of this is that building object designs, scales, and proportions are never necessarily related. There are no overarching compulsions for them to be, outside the discovery of economic benefit that accompanies the occasional alliance of such things.³⁴ Manufactured building products have little reasoned, dimensional

³⁴ Anecdotal examples of production alignments can be cited. The ADA building codes have had the tangential effect of standardizing many products that users grab, walk upon, or push and pull. And contract interiors, and IFMA standards, where many finishes and products by diverse manufacturers are agreeable in many respects, offer another example. But such agreement neither transcends the predictable, nor is it desirable that their method permeate the building industry as a whole when they engender rule-based connections between discrete entities indicative of a centralized approach. As discussed

relationship to each other. Manufacturers actively take *no* responsibility for this lack of any coordination between products. Architects and designers are now saddled with this coordinating responsibility. To be clear, I am *not* calling for any standard to foster any such coordination. It is no one's rational responsibility nor seat of potential control, nor is it to anyone's benefit to "design" production so that it has more spatial agreement. This does nothing to enable innovative design.

Simply, choosing products that do not relate to each other is done more readily in 3D. Architects require the aid of three-dimensional scale visualization of one product against another, in order to streamline the daunting task of creative comparison and contrast. This coordinating responsibility, when attempted as such "by hand" (i.e. without digital speed), actually *is* daunting. Justifiably, architects defer to and insist upon their skill at custom design. Without facilitated schematic 3D visualization, architects are justified in preferring to custom-create solutions. (The exception today is where there is already a manufactured solution preordained, for example when Richard Meier defers to his now-trademark Bega light fixtures or mass-produced handrails. Such production of others, on their best behavior, kowtowing to the designer's specifications along the lines that Philip Johnson envisioned in the example of his glass house mentioned in chapter 2, is accepted at that level.) This is to say also that there is no unifying scale or proportional relationship among building products now hidden, waiting for a clever, digitally enabled architect to master.

While it is true that manufacturers' designs, details, and aesthetic qualities are, for the most part, very much unlike finely made European component products that graciously solve their own construction details, their persistent disjointed relationship has never tolerated excessive regulation under liberal capitalism. Any computational environment in this context cannot be a sort of Europeanizing of building products and production. The approach I am advocating is in a particularly American-pragmatist tradition: it does not change the actual products themselves; it changes the architect's relationship to the

earlier, the decentralized mindset is more promising for engendering an intelligence equal to creativity.

information. This is described below.

Decontextualization: Overcoming Limitations of Classification Systems. The concept of decontextualizing the needs of the architect refers to the possibilities for innovation, which are as follows: Within a proprietary application for an object, innovative technological development is generally performed by its manufacturer. While designing a building, innovative use of an object is generally performed through the management of choice of objects. What I call unknown innovation is a function of an existing object being pushed to a heretofore unknown—decontextualized—application, and being selected by the architect, who was also not aware that such object would be applicable before it was pushed into the context at hand. Unknown innovation comes as a result of the computational environment freeing of irrelevant restraints all queries or searches of the existing building object model database. To query refers to the search function, the way in which a search for building object data is made, and what objects can be considered as relevant answers. To “free the queries of irrelevant restraints” is the act of decontextualizing design needs. (See Diagram 3.1.)

Consider the daunting task of decontextualizing one’s needs “by hand,” which is a task of finding what one deems to be the relevant objects from the entire spectrum of CSI classifications.³⁵ First we will note that the semantics of any classification scheme are

³⁵ As mentioned, I use the term “CSI classifications” here as a convenient shorthand for building object classification in general.

This is not because I feel CSI is the closest to being a usable classification scheme, but because all classification schemes are flawed in reference to creativity (and the decentralized mindset). This hold true for the SfB and AIA CAD Layer classification formats as well. Although some believe those hold more promise than any CSI format, the fact is that none holds any more promise than the others.

I am aware of the differences between UniFormat and MasterFormat, and that many architects would actually argue vehemently that both classification schemes should remain. UniFormat is more general, and good for schematic design, because it classifies only building “elements” in general. An argument for it is that, of course, one cannot pin down an exact material before the design is formulated. For construction documents, in walks MasterFormat. It is needed as it is material and product specific, for that information needs to be “controlled” by the designer.

Ironically the UniFormat–MasterFormat separation is supported by architects on the basis that it gives them more autonomy in both preliminary design development and

arbitrary distinctions. At present we have either “functional distinctions” (UniFormat) or “material distinctions” (MasterFormat). But nothing is best categorized by its current or prevailing function, and earmarked by that function over and above its material makeup (witness the process of “material substitution” detailed in Appendix A, whereby stone can be replaced by wood, by aluminum, by vinyl, by who knows what, all functioning as building siding). And nothing can be rightly categorized by its material makeup and earmarked for a particular function (witness the development of the material of glass into

final construction specification. But I believe that any preliminary design classification system (such as UniFormat) will grow to hurt the creative management of building objects and assemblies more than any exasperating detailed “final” classification system such as MasterFormat ever could. UniFormat classification essentially codes (as does SfB) all the information about what one wants to build in a “general way,” as a default specification. Thus, as data exchange develops, partially developed design ideas (so-called schematic designs) are even more readily co-opted from designers through a UniFormat, and built to the most expedient specifications to which they are already electronically coded. If UniFormat classifications, by cutting off designers earlier, are going to be their undoing, then they might as well enter the struggle I am advocating: to overcome design and specification down to the level of MasterFormat’s proverbial brass tacks from the beginning.

Another point concerning classifications is Baudrillardian. This refers to one’s distance from the “signified thing.” At the moment, UniFormat’s “element/system orientation” (more so than the “product/material orientation” of MasterFormat) distances the designer once again from the actual objects that will in the end be used. A UniFormat classification system detaches the agency of an architect from the signified thing to a degree only the writings of Jean Baudrillard can capture. Decisions that will need to be made are deferred once again, left TBD (to be determined), until MasterFormat specification kicks in. By then, the overall design intent is deferred, once again, to the culturally biased semantics of what’s classified as usable under MasterFormat. A chain of deferrals from the “signified design intent” or “design concept” is set off by beginning design with element/system classifications such as UniFormat and SfB.

Lastly, questions of classification bring up the Assembly vs. Object distinction. The distinction is meaningful in terms of the complexity and integrity of storing object data in the database, but is not meaningful in terms of exercising creative control over them. Too many believe that rational hierarchy or inheritance schemes are pivotal in enabling creative design, but they are not. Of course the most convenient “handle” is desired on assemblies or objects, but convenience during the creative process (whether it be understood as a “puzzle-making” or “problem-solving” operation) refers to whether the designer wants an assembly or an object at a given moment. The creative design process simply does not predict that what one desires is going to be an assembly or an object. But clearly, in terms of manageable database structures, linking assemblies *and* objects so that they are searchable simultaneously is to link them in a Gordian knot. Logic would of course separate them, but creative design does not know whether they are

other functional categories with the development of glass beams and glass structures).

We know, for example, that the arbitrary semantics of any classification scheme are proliferated by both the building product makers and their conventional users. Functional classifications have functional qualifiers, such as industrial, residential, retail, commercial, institutional. Material classifications have material qualifiers, such as high-end/low-end, upgrade/standard, substrate/finish. So what does classification gain?

Classification is the endorsement of the idea of proprietary building technology, of a protected status for any direct application of a certain technology to a building product. Indeed every technical advance holds a wide span of realizations, even though its potential is often limited by the very entities that develop it and the material or functional classification it is promoted within. The historic capitalist sanctification of proprietary technology fosters a slowness to innovation outside the proprietary applications. This is an interesting contradiction, for we know capitalism breeds innovations, and that innovation is not always related to the way in which a technology is initially made to function.³⁶ I am sure of one thing: proprietary technology is a condition of capitalism the architect will not overcome through directly confronting it. Architects are going to have to work around it, even in the computational environment, on a project-by-project basis.³⁷ Fortunately the computational environment can make working around it a process that is fast enough to be both profitable and creative. The line of computational developments I

more useful when separated or engaged.

³⁶ Andreas Huyssen, in Teresa De Lauretis, Andreas Huyssen, and Kathleen Woodward, eds., *The Technological Imagination: Theories and Fictions* (Madison: Coda Press, 1980), 82.

³⁷ On a case-by-case basis, architects have to demonstrate that the use of a proprietary technology object outside its normal classification can be rational. To specify a building product outside the conventions of its intended use raises the idea of an unusual context and deters the manufacturer's desire and ability to sell and guarantee the product. Classification of building object production is an indication of the social construction of the conventions of science and technology. It is theoretically analogous to Thomas Kuhn's description of the social conventions of what he calls normal science. The use of building objects outside their prescribed categorization is analogous to Kuhn's critical science. This concept of Kuhn's is also referenced in chapter 2 of this dissertation. See: Thomas Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago

assume are useful will “work around” any classification scheme, and momentarily make them “invisible” just long enough so that subjective judgments can be made by the user, while irrelevant (generally classification-based) restraints are hidden.

To restate: decontextualized needs code the requirements of the project at hand, but as queries they search many proprietary technologies and classifications, and transcend their arbitrary distinctions. With such decontextualized queries being posted to the building object database, any and all potential product applications will appear as answers, in an unbiased way, as credible for use in the project at hand. Simply stated: an unresolved area of a building design is a decontextualized design need. That unresolved area has embedded restrictions such as building code issues and adjacent objects that impinge upon the area at hand. The designer retains the prerogative to transcend any classifications by not communicating those restrictions in the query (such as industrial, residential, retail, commercial, institutional, indoor/outdoor, floor/wall/ceiling, high-end/low-end, upgrade/standard, substrate/finish).

The architect’s decontextualized search through building information models finds a larger number of realistic uses for existing, proprietary building products and technology. While this is valuable to innovative architects, it is also how producers gain opportunities to sell to new needs. By posting unresolved areas of a design as queries to manufacturers’ product databases, architects solicit “design help” from manufacturers. Any and all manufacturers can “respond” and compete to fill the decontextualized design need.³⁸

It is convenient to call the decontextualized needs of a project the “real needs” of the project. But that is too positivistic. The potential remains that the architect’s decontextualized needs may enlighten or disgust the architect, or present an

Press, 1962).

³⁸ Decontextualized needs are interpreted as broadly as possible in attempts to sell to (or “solve”) them. Decontextualization means to manufacturers an uncategorized, yet realistic need environment as a more objective venue for the application of proprietary knowledge. The decontextualized need intentionally provides manufacturers selling opportunities placed outside cultural, class, or categorical building prejudices because they are irrelevant to technological experimentation or application.

overwhelming number of possibilities that force one back into limited and known categories of use.³⁹ So be it.

Through decontextualized needs, architects ultimately color their own interests, control their own project database, “the design at hand,” to a greater degree. How? It is important not to lose sight of how architects already “manually” search many object classifications. Some architects do this incessantly—in a sense recklessly—with only their design at hand in mind, to the tune of being labeled “dreamers.” The example of the ticket booth used in a residential project can be looked at again here.

How did the architect come up with the idea that the ticket booth was desirable in the project at hand? Well, all of the semantic rationale for what sort of enclosure and space he wanted there—as part of the subjective design intent that is his own—were worked up in his own mind. The objective activity, the searching that took place, was done with all of those subjective intentions embedded in his thinking, thus in his search. This describes the subjective/objective split precisely. No pervasive attempts to communicate the subjective (the intentions) were as valuable as his finally finding the right thing that represented the intentions in actual space: in the architecture.

Many existing structures/spaces were seen or shopped, many custom structures/spaces were sketched by the architect. As possible manufactured and custom solutions were discovered, he had to try them. At one moment something known as a ticket booth, with its objective description, proprietary specifications and limitations, as best as could be judged, sat well in his mind, sat well with his intentions. So the architect came to desire the ticket booth. The decontextualization of design needs in the computational environment should make the same process available, more quickly and more frequently.

How are the decontextualized queries evaluated by producers and manufacturers?
Manufacturers exercise the prerogative to view any query that makes a hit on their digital

³⁹ No one is compelled to make a distinction as to what needs are real. All can operate not knowing.

inventories. That is the computational realm, essentially, of marketing. Manufacturers may devote as much time or thought to proposing solutions to queries as their own policies allow. Or an automated data exchange can bounce any relevant product data back to the inquiring architect's project database. On the one hand, an automated reply eliminates manpower at what could be considered the point of sale, but which in architectural design development is actually the point of preliminary specification. But the point of specification is the moment of architectural choice and choice management. No sale is necessarily made, yet any query leaves a trace with the manufacturer to follow up on. An electronic record of the withdrawal of object data is left on the manufacturer's server. The manpower formerly making replies can monitor the automated replies of servers. That is, the record that architect X took and applied product/service Y, as a realistic possibility for project database Z, is the precise consumer demographic tracking information that churns this computational economy. (See Diagram 3.2.)

This brings up the question of electronic agents and their limits. As manufacturers respond to the demographics of where their products are being specified and used, they are prone to employ electronic agents to cultivate future sales of the similar or same type. Agents are search engines that catalogue a given user's consumption and use history. The user's history creates their directives for finding like objects to present for future consumption and use. The limits of electronic agents must be seen as their containment within the categories they search, and their bias toward creating a gradually more stereotyped and caricatured user. After an innovative product use is executed, increased sales along its line popularize that innovation, making the innovation general.

The decontextualized language for queries to the building product manufacturers' databases is conceived to overcome the reinforcement of the categorical. The architect's search for material applications is to be a tunable one. It can only be tuned if it is conceived that it can start at the outer limits, at complete decontextualization from existing classifications. Then subjectively determined, tolerable limits of choice can dial in the degree of recontextualization or classification to adhere to on each project. This would enable dialing in the radicalism of exchanged data. This approach exists simply

because the architectural artifact is a thing completely implicated in the real production of others. The contributions of all the other collaborators must be taken for what they are. They cannot be masked or changed or faked, the way a stage set can be made to temporarily do for the filmic image.⁴⁰

Innovative architectural practice in the digital realm accepts the fact that limited knowledge and limited answers to complex questions are produced and find a buyer everyday. The decontextualization of architects' needs motivates the contribution of limited or partial knowledge from others in the field of building. And to motivate that means to motivate the formation of a decentralized intelligence, where an innovative architectural practice can converge with the routine practices of consumption and production, and selling and creativity can be mutually gratified.

⁴⁰ I understand that JIT (just in time) production, rapid prototyping, and custom one-off production are all fruits of developments in digital production. These procedures make reasonable the custom production of any specification. But architecture is not yet very near the point of that being reasonable broadly. Currently, the cost-effectiveness of producing a manufacturer-controlled product model is greater than producing the one-off product model controlled by an architect. And the manufactured product models are becoming become more aesthetically viable, even as architects' one-off product models become more cost-effective. One-off production will be used in conjunction with the fixed product model of others for quite some time to come.

Conclusion

Possible Political Effects from Architectural Production

I. Architectural Theory and Possible Political Effects

I will take this section of the conclusion as an opportunity to conjecture about possible political effects from architectural theory on capitalist relations, and start by exploring just how much political impact Tafuri and Jameson conjecture that architecture can have.

Tafuri. The most problematic issues for Tafuri regarding architecture's possible political effects are the factors of speed and time. On a material plane, the speed of capitalist innovation, growth, and change highlight a slowness in architecture, building, and urban planning. Time and again in Tafuri's analyses, the speed of capitalist "concepts"—political ideology draped over economic and spatial developments that have already taken place—outflanks any alternative or radical architecture or urban planning that might have take place on the same territory. For Tafuri this establishes a whole category of "outmoded" architectural concepts in architectural theory and practice. Outmoded architectural concepts may still be politically progressive, and may at one time have been feasible. But the slowness of architectural practitioners and theorists to realize specific designs and their underlying hypotheses in reality, coupled with the spectacle of the enormous technical possibilities available and the daily spectacle of their waste, are more a source of anxiety for politically conscious practitioners and theorists than of any real political possibilities through architecture.

This means politically progressive design and planning concepts that may have worked, or appeared workable, yesterday don't necessarily work to create political or social equality today: at the time when they emerge from concept to concrete reality. This also means politically progressive design and planning projects don't necessarily survive "extraneous" economic adjustments once they are realized, such as changes in their ownership structure, movements in real estate speculation, and shifts in population and employment. One reason for this is that those users who don't have ownership of the architectural or urban developments are generally those

who continue to suffer social and economic inequality amid the flux of ownership structure and real estate speculation. Much of Tafuri's view here has to do with his correct perception of the difficulties that arise from capitalist development's dynamism. Infamously he ends *Architecture and Utopia* with the sentiment that it is useless to propose purely architectural alternatives to capitalism, and that the theorist's role is to do away with such hopes in design as may arise in ideological practice from time to time.

I will conjecture that for Tafuri, the possible political effects from architecture are quite clear. For practice alone there are none. For the architectural theorist, political effects lie in critiquing where the capitalist development of architecture and urbanism continue to create social inequalities. Tafuri sees that we can't anticipate what the aesthetics of architecture and planning should be for a yet to be realized socially just society. For that reason it is useless to propose purely architectural and urban alternatives. The role of the theorist, then, is to continually analyze and present the contemporary, dynamic shape of capitalist development and aesthetic theory. It is only in this context that he writes there is no class architecture, only a class criticism of the aesthetic, of art, of architecture, of the city itself. To produce such criticism, a theorist needs to be at once didactic while also immersing the practitioner-reader in the total image of capitalist development, in the ways that cities are programmed and expanded, in exactly what is being planned, where, for whom, and why. For Tafuri, what we see as the vibrancy of a large city, for example—one that is growing, diverse, and perhaps exciting and chaotic—is only the fact of the indeterminacy of its planning. To design architecture and urbanism that is at one with or aligned with such indeterminacy is to design along the lines of Rem Koolhaas and OMA—where urbanism and aesthetics are an attempt to make the language of capitalist development live, to make it a designed part of the experience of everyday life.

It was shrewd of Tafuri to point out what remains true today: that the contradictions and chaos of capitalist development are manifest particularly strongly in the field of building. The vibrant, chaotic city comes as a result of the contradictions within capitalist economic cycles as a whole. It is a very complex problem to try to enable a politically progressive architectural or urban practice that can control the profit motive or social inequality sneaking in as its projects become realized.

Tafuri feels practice—educated by criticism—needs to experiment repeatedly with its role in capitalist development. Experimentation may indicate an organization for aesthetics that we don't now have. Architecture should accept the fact that Keynesian planning and predictive economic models, always in process, do away with the need for final models or utopian goals being presented by architects or urban planners. In the end, what is clear to me from Tafuri is that architecture and urban planning need tools based on dynamic models of capitalist growth and the continual revolution of mass production (such as those once proposed by the Russian economist Yevgeni Preobrazhensky),¹ merely to have a chance of having any political effect.

Jameson. I would not say that, in dealing with Tafuri, Jameson set out specifically to find any of those tools based on dynamic models of capitalist growth that could help architects and urban planners. It is clear that he did not take any “direction” from Tafuri to solve this or that problem regarding political action and aesthetic production. Yet clearly Jameson discusses the political impact of contemporary aesthetic production. So it is fair to ask whether he articulated any theoretical concept whereby architecture might change capitalist relations. In fact, he has written simply that postmodern aesthetic production is not political; that any critical value from aesthetic production is no longer appropriate and can no longer operate successfully.² Postmodern aesthetic production simply corroborates the contradictions, the fragmentation, the dynamism and complexity of this form of capitalism that surrounds it.³ Having arrived at that conclusion, Jameson presents his tactical, Gramsci-inspired enclave theory as a timely solution to these difficulties for aesthetic production. Therefore I will consider the possible political effects from this enclave theory, as well as any similar possibilities stemming from his critical analysis of architecture in case studies, and finally from his original concept of cognitive mapping.

Considering Enclaves as Strategic Beachheads. Is there any alternative way for aesthetic production to affect capitalist relations? Jameson holds that there is, but that the increased dynamism and complexity of capitalism make it impossible to realize political effects in the

¹ See Manfredo Tafuri, *Architecture and Utopia: Design and Capitalist Development* (Cambridge: MIT Press, 1976), 173, for Tafuri's reference to the promise of the theories of Preobrazhensky.

² Fredric Jameson, “Architecture and the Critique of Ideology,” in K. Michael Hays, ed., *Architecture Theory since 1968* (Cambridge: MIT Press, 1998), 460.

³ Jameson, “Architecture and the Critique of Ideology,” 455–456, 460.

capitalism of what he calls the first world, that of the more advanced nations. So instead he champions the importance of small pockets or beachheads of idealist thought. He points to an artistic technique he calls a Gramscian alternative or enclave theory as a way to carve out such spaces, whether built or imagined, whose very conception exists as a political alternative. This is where politically charged aesthetic production can occur. It is either in the protected, sequestered realm of the imaginary, on paper (as it cannot be built in the first world), or in what Jameson conjectures to be the backwaters of capitalism, in so-called second and third world economic spaces, where the speed and dynamism of the global economy does not so readily disable them.

A beachhead means an initial accomplishment that opens the way for further developments. Such footholds are established in anticipation of greater forces to come. And where is that greater force? Nothing of what Jameson writes points me to it. So let's take, for example, the very beginnings of a specific political reform movement to be a "strategic beachhead." Take, for example, the gay rights movement. Certainly some initial ("early") gay rights strategies include forms of politically charged aesthetic production that addressed and preceded the actual reforms later achieved. Here we see that a "greater force" has indeed emerged, as real reforms establishing gay rights in our political economy have already been won. And it's true, as Jameson believes, that strategic beachheads can function to inspire us, to raise our consciousness, and then we have to actually act, to make real the political ideals those beachhead had earlier articulated (on what was then some advanced terrain).

Such a process in fact seems very ordinary, a reasonable part of the social and political reforms that have been modifying capitalism in what are actually very good ways for quite some time. But have alternative political economies been built by any such enclave theory of aesthetic production? Resoundingly Jameson has already answered—no, this is not possible in western culture; architects in the West are prevented by the capitalist economic system itself from planning or building any noncapitalist projects, and hence they cannot articulate any alternative forms of social relations under capitalism.⁴

Considering Jameson's Critical Analysis of Architecture in Case Studies. The realm of

⁴ Jameson, "Architecture and the Critique of Ideology," 454.

architecture and urbanism offers something else to Jameson: buildings as allegorical representations of his own abstract principles and ideas of how global capitalism is structured, and the issues and contradictions it holds within it.⁵ Jameson has no doubt that since we live in a global political economy we all tend to move in and out of its overlapping local and global dimensions all the time, and this makes the positioning of ourselves in relation to the geopolitical totality quite difficult.⁶ He feels that place, in the United States, exists in a greatly diminished capacity, below the more powerful network of the spaces of global capitalism itself. He is preoccupied with the idea that we face a tangible problem as regards space; we suffer anxiety because of it, but know not how to theorize or speak of it well, so we endure some great enfeeblement of political capacity as a result. This is why Jameson's main thrust when analyzing architecture is to render buildings as case studies of how we are somehow "caught" within the complex global networks of capitalism, how we consistently suffer greater expansion of corporate space everywhere in our daily lives yet have no way of resolving or representing our problems with that, even abstractly.

One of the best strategies to draw these issues out of his studies of specific buildings is to plainly describe a building as a spatial equivalent—as an allegory—of global capitalism. This is what he does in his analysis of the Westin Bonaventure Hotel in chapter 1 and of Frank Gehry's house in chapter 4 of *Postmodernism, or the Cultural Logic of Late Capitalism*. For Jameson the avant-garde architecture—Frank Gehry's house—could perhaps have been a consciously created spatial equivalent to the capitalist system, while the vernacular architecture—John Portman's Westin Bonaventure Hotel—is essentially an unconsciously created spatial equivalent. These buildings when interpreted allegorically by Jameson do offer great cultural insights, entertain, and consume forty-two pages of *Postmodernism*, none of which I would refute, though the writing does seem to stretch every conception of their architects' intentionalities. What is clearly derivable from these building allegories is, once again, Jameson's thesis that we can't fight what we can't see: that we have to find ways to represent global capitalism in order to regain a capacity to act politically within or against it. Such action, Jameson feels, is neutralized at present by our spatial as well as social confusion.⁷ Jameson's use of architecture helps us visualize what he thinks are political action

⁵ Fredric Jameson, *Postmodernism, or the Cultural Logic of Late Capitalism* (Durham: Duke University Press, 1991), 120–121.

⁶ Jameson, *Postmodernism*, 52, 127.

⁷ Jameson, *Postmodernism*, 54.

problems, but doesn't suppose any political effects from architecture, nor that architects have any special capacity to achieve such effects.

Considering Cognitive Mapping. By Jameson's logic it appears to me that, to maintain at least some level of political possibilities, we have to progressively back away from the idea of any real aesthetic production in the current global economy, to deal only with paper or imagined production in "other" spaces, and finally, to his idea of "cognitive mapping," or a mere concise mental image of the global capitalist system that enables us to see the political-economic relations that structure our world and what we are capable of performing within them. Jameson writes that it is critical for architects to develop a coherent conception of the global capitalist system, against which they might develop a self-consciousness of their activities in this society.⁸ He states that the incapacity to spatially map is crippling to any political experience.⁹ What does this mean?

I have to admit first that it is of interest to me as an architect that such a spatial analogue taken so directly from architecture and urbanism is involved in this concept of cognitive mapping. It indeed entered Jameson's purview from his reading of an urban theorist (Kevin Lynch, *The Image of the City*) who interviewed and questioned subjects and asked them to draw their city context from memory. While Lynch suggests that urban alienation is directly proportional to the mental unmapability of local cityscapes, Jameson's analogue to this is to suggest we need to overcome any unmapability of our local position in the global economy in favor of a global image of the class structures involved. Jameson's cognitive mapping is of social structures and class relations on the global scale; we are to extrapolate from a mental map of city space to a mental map of the global social totality, so that we can understand our real relationship to our real conditions of existence.

Jameson admits that cognitive mapping is really his code word for "class consciousness" on the stage of the contemporary global political economy.¹⁰ This is all well and good; it follows Althusser's understanding that we can unmask ideologies draped over our relations, so that we can understand what is really going on in those relations. So if ideology is the imaginary representation

⁸ Jameson, "Architecture and the Critique of Ideology," 454.

⁹ Jameson, *Postmodernism*, 416.

of the real structure of our existence, then we can get beyond it by fully and cognitively mapping, becoming conscious of where we fit in and which others are situated like us, or dominating us, in the contemporary global political economy. Now that is an important thing to do, but the idea of cognitive mapping has itself no political effect or consequence. It is however a useful tool in planning any action, and as Jameson writes, it can be an integral part of any socialist political project.¹¹ He is in fact clear that any form of political postmodern production, if there is to be any, will have to invent and project a global cognitive map in social as well as spatial dimensions. Whether or not any such project has an aesthetic dimension to it with any possible political effects is not foreshadowed at all by the mere fact that the analogue of cognitive mapping is drawn from the realm of architecture and urbanism.

II. Architectural Practice and Possible Political Effects

Here I will conjecture about possible political effects on capitalist relations from architectural practice. I will comment first on the possibilities immanent in the computational realm and within the three social divisions of practice analyzed in Chapter 2, then on the possibilities immanent in any of the more global groupings of contemporary practice as outlined at the end of the survey *A Global History of Architecture*, by Mark Jarzombek, Vikramaditya Prakash, and Francis Ching.

Possibilities in Computation and the Social Divisions of Practice. The second fold of practice I discussed in Chapter 2—architectural production in relation to the vernacular—is the same sort of practice that’s enabled by the computational strategies discussed in Chapter 3. This is a practice where simply producing architecture in ways different from the vernacular context or product manufacturers’ intent is what counts as success. While the possibility of success along these lines may be empowering to the practitioner, I have no reason to posit that this approach effects actual political change. A personal freedom of the practitioner is activated, but once again it is a freedom taking place within the constraints of the marketplace. The continuation of such a practice depends on continued market success. This sort of architectural practice, producing

¹⁰ Jameson, *Postmodernism*, 417–418.

¹¹ Jameson, *Postmodernism*, 416.

architecture in ways different from the vernacular context or product manufacturers' intent, enables architects and firms to derive both cultural and economic capital from a practice. Their very creative subversion of norms in the aesthetic marketplace by necessity needs to be perpetual, yet its political potency (as discussed in Chapter 2) has already defused itself.

Possibilities in the Global Divisions of Practice. At the very end of their survey *A Global History of Architecture*, Mark Jarzombek, Vikramaditya Prakash, and Francis Ching outline a division of contemporary practice into seven groupings (or modes of operating) which can be understood internationally within the terms of architectural discourse. These groupings make sense when thinking globally, since their diverse types of activity inevitably occur in synchrony, and not necessarily in any coherent relation to one another. It is useful then to look at each of these groupings and conjecture whether possible political effects are immanent in any of them.

The first of Jarzombek, Prakash, and Ching's groups consists of large, international firms such as KPF, Gensler, HOK, NBBJ, and RTKL. In this grouping, success at architectural practice in a global economy means organizing the practice for success wherever capital is most intensively being invested in buildings and infrastructure. Therefore tall buildings and planned developments are still important icons, and China's development is notably important (as is Dubai's, and as had been Singapore's and Hong Kong's). Are possible political effects immanent in this grouping? I think the interaction with China is promising, but only if it leans politically in the Chinese rather than the Western direction. If Chinese capitalist developments move from experimentation to a full-blown capitalist political economy, there is not much of interest or promise. However, if Chinese capitalist experimentation does not spell another brand of Americanization, and these large-scale architectural developments made possible by Chinese socialist bureaucrat planners' interactions with Western capitalist architects fundamentally fuel the Chinese communist state essentially "as is," then we might indeed see the sheer mass of China shift the geopolitical momentum in a socialist direction, while some form of global market remains. Western architects may then find themselves developing significant and updated models of large-scale planning, beyond what was reached in the early twentieth century by the USSR, or by China prior to Hong Kong's reversion to Chinese sovereignty in 1997.

Second, Jarzombek, Prakash, and Ching delineate the work of international leaders of high design. These include Gehry, Koolhaas, Hadid, Calatrava, Libeskind, and Nouvel, and recent history includes such renowned international commissions as Utzon's Opera House in Sydney, Scharoun's Philharmonic Hall in Berlin, and Johnson's AT&T Building in New York. In this grouping prestigious buildings are commoditized globally. Tourism and the Bilbao effect are part of it, as had been the case earlier in nineteenth-century international exhibitions and twentieth-century world's fairs (New York and Chicago). In this grouping, the dominant architects are more or less freed of economic restraint (Bourdieu's noneconomic autonomous producers) and execute high-level experimentation with technology, program, and function, generally all at once. Like Ralph Lauren and LVMH, such architects are themselves small economic engines of capitalism. Their aesthetic influence is already highly integrated, very early on, in the global supply chain. There is not here a great measure of struggle between them and vernacular forces of production to develop their own brand of aesthetic production. Among this group Jarzombek, Prakash, and Ching observe that only Koolhaas has a theory about the status and future of architecture. For this sort of practice, governmental (political) and capitalist elites commission illustrious autonomous architects, who create symbolic celebrations of their capital in the name of architecture. Are possible political effects immanent in this grouping? I think it's clear that these architects operate in the first fold of architecture's social space, able to alter the vernacular methods and materials. There is no reason this sort of practice cannot exist under a socialist, capitalist, or even a fascist political economy, since each can make a space for dominant architects to prosper. While their production can generally affirm the dominant political values, the promise I see in it lies in its experimentation with technology, program, and function that this group carries out so well. If that strength is combined with the socially just commission (be it governmental or private), then some of the best minds of architecture would be employed on important concerns of social justice, while a well-connected client is there to pay the bills and defend it.

Third, Jarzombek, Prakash, and Ching delineate the work of non-governmental organizations (NGOs). These include the Kutch Nav Nirman Abhiyan, a network of voluntary organizations working for social improvement in India, and for relief after natural disasters, founded as a

response to the devastating cyclone that hit Kutch in May 1998; Japanese grassroots seismic design; and the likes of Habitat for Humanity. In this grouping local traditions and techniques are not fetishized. Rather low-tech solutions from anywhere are freely combined with locally dominant techniques and methods that are easily understood and executed so as to get results. Are possible political effects immanent in this grouping? Here architecture is a part of the NGO's thrust to directly apply humanitarian and social aid. The bonds between architect, NGO, and client (i.e. refugee or someone in need of relief) are immediate and strong. Whether other or larger effects are to flow from these most-often provisional works that initially takes form as architecture depends on the level of commitment and political will of each.

Fourth, Jarzombek, Prakash, and Ching delineate the work of small firms, similar in sympathies to the third group just mentioned, who generally design within the context of the local. In this grouping, designing within the context of the local does not mean replicating ancient techniques, aestheticizing local customs, or recreating local vernacular designs. Examples include some of the work of Atelier Feichang Jianzhu in Beijing and of Adria Broid Rujkind in Mexico City. Design is about the careful crafting of well-thought-out buildings that intelligently respond to the constraints of their climate, site conditions, and materials. They are all very serious, and irony is remote from their work. Are possible political effects immanent in this grouping? I would say the political position of such an approach is neutral. (Therefore political effects do not appear to be forthcoming. Perhaps intentionally so, as this is sometimes the design approach of academician-architects who find themselves perpetually on the academic job market.) These designers follow principles that are reasonable across the political spectrum, as the sustainable management of buildings, land, and resources is valuable in any environment. The intelligence and political neutrality of this approach can be useful in the sense of smoothing an architect's career path, where the architect works across international and political borders, and maybe moves up statuswise in the social spectrum of practice, perhaps to the first fold, where finally the experimentation can be more bold, exuberant, better funded and recognized.

Fifth, Jarzombek, Prakash, and Ching delineate the work of architects (and some amateurs) who have an open sensibility to the potential of readymades. Here irony is present. These include the works of architects who use off-the-shelf technologies to subvert expectations: Godsell's Future

Shack, the Rural Studio work under Sam Mockbee and those who continue it; and the work of amateurs such as the beer can house in Houston, the newspaper house in Massachusetts, the car tire house in Nevada, and squatter townships and settlements using discarded building materials in Mexico and elsewhere. In this grouping the works are often about innovation and imagination, and the premise that even the poorest can build or have shelter built with a sense of style that is as uplifting and perhaps as whimsical as it is useful. Are possible political effects immanent in this grouping? Where the work is only to subvert expectations, I have already addressed how that is innovative but not political under capitalism. Where the work is part of an architectural effort to apply humanitarian and social aid, I would say the political possibilities are there to the same extent as with the NGOs. The bonds between architect and client are immediate and strong; any larger effects are up to the level of commitment and political will of each.

Sixth, Jarzombek, Prakash, and Ching delineate the work of architects whose designs revolve around issues of the environment. Many architects and firms are doing some or all of their work in this way. Environmentally sensitive buildings range from the low-cost to the well-researched and technically sophisticated high-cost solution. Here the word “sustainability” is used in many ways, from use of materials to indoor air quality to energy use. Standards have evolved recently (such as LEED) and try to encompass all the relevant issues in a building performance rating system. Are possible political effects immanent in this grouping? I have to recognize that there are many who believe that fostering sustainable design is the most politically charged form of practice and set of beliefs we can have today. Certainly the political Left and Right in the U.S. can address the issue of sustainability as if it were political. But for all the attention this has received, I don’t see any political component to sustainable design and the environment simply because the principals of sustainability are reasonable across the political spectrum. As its obvious efficiencies make it required across corporate and government commissions, sustainability becomes the legal and logical technical necessity. It becomes part of the contemporary vernacular, not so much a reform movement or an alternative, as much as an extension of the political economy. Capitalism perseveres, avoiding potential environmental catastrophe and prospering through warding it off. Sustainability works with our present global political economy, and present governments, because just as much as these institutions are responsible for environmental problems, it is with their cooperation alone that the necessary

resources become available to actually deal with problems as vast as global environmental and climate crises.¹² What if sustainability doesn't grow, doesn't catch on? Isn't it then the "alternative"? Sustainability does grow as threats to the environment increase, and it ebbs as it is required less. Sustainability in architecture is just the environmental facet of the real problem-solving architects are trained to do. Add more global warming and energy shortages, and you'll see more sustainable architecture. Take some of that away, and you'll see it level out.

Seventh, Jarzombek, Prakash, and Ching delineate the work of preservationists, conserving and maintaining our architectural heritage. At the macro scale these include the over 830 properties of cultural and natural heritage on the World Heritage List. This grouping also includes the myriad historical societies and their local and national sites preserved and maintained for public use. In this grouping tourism plays a role, as the honoring of local heritage accepts the traffic of global visitors. Thus preservation calls into the equation the destruction of tenuous cultures, through the anthropologists gaze and the impact of tourism. What political effects may be immanent in this grouping? Many projects with expressly political aims are possible here. The selection of sites to be protected and opened is an inherently political project of anthropology, culture, economics, and nationalism. An architect's participation in any preservation project, I would say, expresses a political view from the very moment of cultural or site selection or of historical society membership. Such politics are also present in the realm of identity politics, where the meaning of consensus is found to be at stake again and again.

III. General Remarks on My View: Possible Political Effects from Architectural Theory and Practice

I chose to focus this dissertation on the thoughts of Tafuri, Jameson, Bourdieu, and a few others, after I had considered including the less architecturally focused political theory of the Radical Democrats, Social Democrats, and alternative claims from theories of identity politics. I had also considered the social theory and philosophy of Gilles Deleuze and Félix Guattari, Jean Baudrillard, and Jürgen Habermas, for example, as well as the more architecture-related critiques

¹² For expanded thinking on this topic, not necessarily in support of my view, see: Jarzombek, Mark. "Molecules, Money and Design." *Thresholds*, no. 18 (Cambridge: MIT Dept. of

of global development and urbanism by Edward Soja, Mike Davis, and Saskia Sassen. I will not write all of these off in a single sentence, for I have treated each briefly in the text and in extended notes. But I want to say that beyond Tafuri, Jameson, and Bourdieu, these others didn't indicate to me any more promise of political effects from cultural production such as architecture to warrant fuller discussion here. What I have derived from reading all of them, however, is a consistent concept of which political effects really matter. This is the concept that those capitalist developments that maintain or improve some form of social justice or equilibrium are deemed to have a positive political effect. This is not an agenda of revolution, but of political reform within capitalism.

I think it is a matter of course, not a matter of any great utility to such an agenda of reform, that architects are becoming very good at practices enmeshed in global supply chain management, both digitally and physically, such as Frank Gehry's practice, or in the global outsourcing of electronic document creation based on the global supply and demand in architectural computational labor. Architects are becoming good at portraying in three-dimensional space how they may perceive the space of global capitalism: whether as a train wreck, a tragedy, or the exhilaration in the diaspora of the global market. Capturing the image of such dynamic aspects of capitalism in built form is not anything that ensure architecture has a political effect. Nor do I think it's of any use politically that the Bonaventure Hotel, or Frank Gehry's house, or a Rem Koolhaas urban project might be interpreted as the image of any current geopolitical reality. For me such architectural theory and practice builds representations of reality like a mime, or a crime scene photographer, or an ancient Greek playwright. And what is the political value of any catharsis that might be the result of such architecture's reception? It's hard to say the catharsis results in anything more than entertainment and group psychotherapy.

I recognize there are many who would disagree, but my view is that architectural theory and practice have only a small role to play in any reform agenda within capitalism. The containment of individual architectural projects by space and economic forces does not allow any project to control its political impact over time. Rather, the presence of the project's sponsors—the people and their political will which support the ongoing structure and management of the built work—

Architecture, 1999), pp. 32–38.

turns out to be most important enabling factor where the goal of the project is political reform. The agency of the project's sponsors is what can ensure that the work continues to meet the political goals for which it was conceived, as the market and social forces it exists within shift with the passing of time.

I will foreground, in this final thought, the idea that the end users of architecture, the clients as nonarchitects, in the middle and even the low end of the market, can be enabled to more directly control the design of the spaces around them. There is some potential excitement in this form of architecture within capitalism that can occur particularly in relation to the global supply chain system we currently view as expanding. Those computational tools I discussed as useful to the architect at the end of Chapter 3 can also be thought of as enabling end users to expand their role as clients. By this I mean my idea of the decontextualization of needs can be brought very simply to the end user if the global supply chain of architectural building components presents a user interface directly to the end user. Here end users would select and assemble all the design elements of a structure, which their architects, developers, and builders have customarily done for them. Such a great deprofessionalization of the design of space may at once sound like a globalization success story—driven by direct manufacturer-to-consumer supply, pull- not push-side production, the most efficient producers, and the mass customization of styles. It also sounds like a populist architecture—driven by opinion polls as well as the lowest common denominators of popular style, like an architectural version of reality television, from America's Funniest Home Videos to America Idol to YouTube.com's most-viewed user content. Indeed it also implies in its populism the elimination of the architect from a whole range of commissions.

But direct contact with consumer demand does not redefine the design of buildings and houses as quickly as it does websites, the clothing we wear, and even automobiles. Buildings and houses still remain so costly that about eighty to ninety percent of their value generally needs to be bank-financed. This is a significant fact. One consequence is to mute architecture's progressiveness both aesthetically and sociopolitically. The end users' commitment to pay off the largely financed cost of building makes paramount the concern for resale value and market expectations, which in turn tilts most aesthetic and functional decisions toward the conservative and expected. The act of building today remains too expensive to be so easily radicalized or

loosened from traditions by direct user or populist participation in any way comparable to less costly modes of aesthetic production. This would remain true even if the levers of the design and building process were put directly in the hands and imaginations of architecture's end users themselves.

Appendix A

Rehabilitating the Term Vernacular in Architectural Discourse

This appendix is a review of work on vernacular studies in architectural discourse, connecting a brief historiography of the use of the term vernacular with my claim that we need to overcome the term's historical loading. This is a problem because important relations between innovative architectural production and everyday production persist over time, and we need the historical continuity of the term vernacular production to enable theoretical clarity (both historically and for contemporary theory) on issues surrounding the relationship between innovative architecture and vernacular production.

Contemporary western culture, a socially constructed reality with a great deal of its legitimacy emanating from the dominant ideologies of liberal democracy and capitalism, while generally not considered a natural condition, can be seen to have made certain things appear natural within it. The certainty of this rests on the sanctity of the principles of protecting proprietary, trademarked production. Those things made to appear natural in the realm of contemporary western architecture and building include the methods and materials of building of great familiarity to professionals in the design and building industries, those known to the trade though not necessarily to the general consumer. It might be difficult to accept these methods and materials of construction not marketed to the general consumer as “vernacular,” since they are made and marketed for use by professionals, and only those in a particular sector of the general economy—the field of building. And it might be difficult to accept a definition wherein the vernacular is socially constructed as a functional sector of its political economy, rather than simply being some unselfconscious form(s) of building. But the following review of work on the term vernacular in architectural discourse demonstrates that such a constructed vernacular as today's holds a historical unity with older and clearer definitions of the term when it is viewed as a system of regulated knowledge.

Historians of the vernacular in building such as Bernard Rudofsky and Amos Rapoport have read the term as a translation into physical form of a culture's predominant needs and values; as a

culture's prevailing world view writ small; and as closely related to the common culture of the majority of a population, and to life as they live it. The vernacular is also thought to constitute the majority, quantitatively, of a culture's built environment.¹ In the 1960s Rudofsky and Rapoport pushed the reintegration into architectural education of the study of vernacular building types by accepting wide parameters of physical characteristics, concepts, and images from around the globe as defining this category. Their inclusiveness attempted to reintegrate things that fell outside architecture school curriculums then largely concentrating on the high tradition, and thus came to be defined mostly by those things the academic courses, at the time, excluded.

In a useful survey published in 1990, "'Vernacularism' in Architectural Education," Yasemin Aysna and Necdet Teymur discover that the term vernacular is associated with a variety of groups of physical characteristics, concepts of building methods, and images of building types. These physical characteristics, concepts, and images range from "old" buildings to rural settlements, from craftsman-style cottages to mud huts, and from nomadic encampments to suburban housing developments. They are differentiated by locality, region, style, building processes, building materials, or construction types.²

As Aysna and Teymur point out, a central problem is that conceptions of the vernacular have largely come as reactions to persistent historiographic exclusions of certain building types from the boundaries of architecture as a discipline, rather than from the specific nature of the newly recognized traditions themselves.³ Just as certain important buildings, styles, and names are always chosen to constitute an architectural historiography, so are certain ideal types, best examples, and attributes of prototypes chosen to constitute the elements of an established historiography of vernacular architecture. It is easy to determine the qualities and attributes of the vernacular by simple opposition to the prevalent concept of high architecture (e.g.

¹Amos Rapoport, *House Form and Culture* (Englewood Cliffs, NJ: Prentice-Hall, 1969), 2.

²Yasemin Aysna and Necdet Teymur, "'Vernacularism' in Architectural Education," in *Vernacular Architecture: Paradigms of Environmental Response* (Aldershot, England: Avebury, 1990), 302–303.

³Aysna and Teymur, "'Vernacularism' in Architectural Education," 304–305, 311.

formal/informal, self-conscious/unselfconscious, global/local, architect-designed/architecture without architects), but any attempt to hold the high and the low building traditions at binary loggerheads appears not to be useful. As well, the discourse around the vernacular, as a discursive field, denies any attempt to come up with a better definition of the term.⁴ However, Aysna and Teymur list, by way of example, certain interests in vernacular studies that tend to be invoked in response to certain existing conditions. These see the vernacular coming as “reactions” to:

- industrial life (invoking preindustrial forms),
- professionalism (invoking craft attitudes),
- urban society (invoking rural living),
- the present (invoking historical buildings).⁵

These “reactions” identify important bodies of knowledge vernacular historians have looked at (a knowledge of preindustrial methods of building, of craft and folk techniques, of rural living, of codified historical traditions). Looking at “types” of knowledge is a useful approach, and it is already present in the literature on vernacular architecture. Various methodologies of building are commonly described in vernacular studies as systems based on: (A) traditional, shared group knowledge, (B) the knowledge of relatively specialized building tradesmen, (C) the codification of builder’s guides, or (D) a modern order of technical advice and building codes.⁶ It is my assertion that looking at such bases for practice as systems of regulated knowledge gives us a way of looking at the vernacular that does not try to better define it (although certain historians

⁴Aysna and Teymur, “‘Vernacularism’ in Architectural Education,” 302–303.

⁵Aysna and Teymur, “‘Vernacularism’ in Architectural Education,” 311–312. Also, Aysna and Teymur pointed out (315) that the vernacular as a field of study owes its emergence to dissatisfaction with the existing state of architecture, and to the changing attitudes outside the discipline towards communities which have been excluded and marginalized.

⁶The rhetoric that periodizes these systems or methodologies of group knowledge in vernacular studies, as far as I am aware, uses the terms *primitive*, *preindustrial*, and *modern vernacular*. These seem to pervade the chronological categories of vernacular building traditions in this scholarship, although alternative terms are offered by other historians within the field. Such alternatives are still three-tiered, chronological categorizations aligned with “primitive, preindustrial, modern” by substituting the likes of “folk, traditional, civilized,” or “tradition-oriented, inner-directed, outer-directed.”

do make their own attempts). Also important for my purposes is that a conception of the vernacular as a system of regulated knowledge can allow it to exist today, under the special aspects of contemporary western culture where the social organization that once maintained vernaculars based on traditional, shared group knowledge, for example, seems to have been replaced by our “voluntary” compliance with social norms expressed as the legal rights of others laid down in ordinances and code books produced by a consensus of self-interested professionals, landowners, land buyers, builders, and municipalities.

(A) Traditional, shared group knowledge. In architectural vernacular studies, this defines a tradition of building at a time when technology, the economy, and social organizations are such that knowledge of every pragmatic skill is diffuse, known by all. This includes practices in which no single entity is employed full-time to design buildings for others to erect. With no technical vocabulary (indeed this tradition refers to preliterate cultures), and little specialization in the culture beyond that of age and gender, every aspect of this tradition is known to all. It is also marked by a degree of cultural self-containment that is total, for such a culture knows of no other modes, no other forms of building production against which it might contrast its own methods. While there may have been some earlier contact with another culture, for a time there is no importation of “other” ways to build. There is no high to contrast to low, there is only *the* tradition, and it is always currently in use.⁷ As families or large cooperative groups, everyone is capable of building their own dwellings. Trades are hardly differentiated when every family contains all the available technical knowledge known to the way of life.⁸

(B) Relatively specialized knowledge of building. The term “preindustrial” is often applied to traditional cultures that do not have contact with other cultures, and hence other ways to build. More specifically this means tradition and shared knowledge begin to adjoin a more technical ordering and memory of the various building methods. It remains true in a preindustrial culture that everyone still knows the building types (and perhaps even how to build them), and the client is still very much a part of the design-build process, not yet a consumer of a building, but the

⁷ Robert Redfield, *Peasant Society and Culture* (Chicago: University of Chicago Press, 1965), 72–73.

⁸ Rapoport, *House Form and Culture*, 3.

employment of tradesmen, though at the outset a tradesman is such only part-time, marks a process of increasing specialization.

The expertise and knowledge of building tradesmen is at first only a matter of degree over the general population's knowledge of building methods. But with greater trade specialization (and urbanization), owner participation decreases.⁹ Some, such as Rapoport, suggest that with this, the tradition of shared knowledge as the glue of early preindustrial (and of preliterate) methods breaks down. I view this rather as a knowledge substitute created in the more technical orders of building knowledge then known to tradesmen and professional designers.¹⁰ Nonetheless, the knowledge of relatively specialized building tradesmen marks the introduction of technification and specialization into a culture (since building tradesmen, rather than each family or group, are responsible for constructing most buildings).

The point at which traditional, shared knowledge gives way to specialized knowledge is very usefully defined by Redfield, who holds that specialized knowledge can be assumed to be in place in a culture when one can locate both high and low cultural traditions of building. This continues a discursive approach to the vernacular, for the knowledge component (now becoming specialized) can be applied to both the vernacular and the high design traditions equally. Both are forms of regulated knowledge, both are influenced by orders of building knowledge then known to tradesmen and professional designers (and soon divulged in builder's guides). By this dialectic, methods one would call vernacular do not exist without reference to a coexisting cultural vanguard concurrently staking out the tradition of high methods. In such a dialectic the vernacular and high traditions are interdependent, replenished and influenced by each other simply because they are aware of each other.¹¹

⁹Rapoport, *House Form and Culture*, 4.

¹⁰As tradition as a regulator disappears, I find a certain amount of nostalgia and regret in the rhetoric of some vernacular historians (a less troubling chronological determinism is also present, but it can be avoided). See Rapoport, *House Form and Culture*, 4, 6. Also, it is my opinion that this evolution from the traditional, shared knowledge to relatively specialized building tradesmen to the technical order, does not contribute an ethical or qualitative component to the question of the vernacular, as Rapoport suggests.

¹¹Redfield, *Peasant Society and Culture*, 68–69, 71.

(C) *An order of specialized building types and building guides.* Builder's guides and architectural pattern books influenced the vernacular as a sort of technical order placed upon it, an order that emanated directly as an interpretation of the high culture. The reliance on published sources for the design of private structures became a prevalent practice in America throughout the eighteenth century. Rather than the tradition of knowledge in the heads of tradesmen, builder's guides and architectural pattern books began to circulate as published sources for building design information where there was an absence of persons specifically trained to design buildings for others to erect. With these guides, houses and even the more important structures come together under informal collaborations between clients and competent craftsmen relying more or less directly on builder's guides and pattern books for their architectural ideas.¹² These publications are in actuality the codified cultural controls of the high culture on the vernacular, where the vernacular is understood as that which ordinary people can manage to have built for themselves.

Asher Benjamin's *Builder's Guide* of 1839 and Andrew Jackson Downing's *The Architecture of the Country House* of 1850 are examples. They can be seen as manifestations of a high/low interplay. The *Builder's Guide* was popular with builders right up to the Civil War, with its many line drawings of details that would be required by a carpenter, but only occasional plans and elevations. Publications like Downing's proliferated after 1850.¹³ Based on a variety of earlier English publications such as Francis Goodwin's *Rural Architecture* of 1835,¹⁴ treatises such as Downing's soon came to address themselves primarily to the owner: they began to sell product to him, although not yet as a completely passive consumer. They regularly included a perspective view of the design set in the landscape and, importantly, discussed at length a "moral" philosophy for selecting a design which the owner ought to consider seriously.¹⁵ An

¹² George Tatum, introduction to *The Architecture of Country Houses by Andrew Jackson Downing* (New York: Da Capo, 1968), ix.

¹³ Leland M. Roth, *A Concise History of American Architecture* (New York: Harper and Row, 1979), 85.

¹⁴ Tatum, introduction to *The Architecture of Country Houses*, vii.

¹⁵ Tatum, introduction to *The Architecture of Country Houses*, ix.

owner without an architect, and in an informal collaboration with the tradesman, still built without much knowledge of the high traditions of architecture, but with high culture present through the medium of a published book (where the fact of publication itself introduced a high degree of sanctification to the undertaking—the rough equivalent, on my reading, of the approval the phrase “as seen on TV” once brought in the 1950s). Building without the architect here meant that the client was out in the field with an architect’s book, collaborating with competent tradesmen and builders in interpreting it. In subsequent book editions, high-to-middle cultural liaisons such as Downing massaged their codes in order to more closely achieve popular acceptance: hence reach a larger, mediated, technical order.

These books influenced the vernacular through the recording, writing down, and drawing out of formal design restraints. When the vernacular is seen as a market, there is room for ambivalence about whether this is any sort of advancement of culture. In the market are those non-clients willing to take a step up from the prevalent culture of scarce professional design help and partake at a distance, through the mediation of print, in the privileged, high-culture designer-client relationship, at a point where the high end of the low and the low end of the high might be said to communicate in building.

The vernacular culture has indeed been massaged and shaped by pattern books in the hands of builders and clients proliferating as storehouses of mail-orderable and approved house plans; and by entities in the design vanguard, through mediations in print such as the *Life* magazine “American Dream Home” series which employed Robert Stern and Michael Graves. But not often do pattern books emanate from the high culture as an attempt to cull the cream from the crop of the potential client base used to the less formal, less codified collaboration with builders. (Although *Martha Stewart Living*, *Ralph Lauren Design*, and retail furniture catalogues such as *Crate and Barrel* and *Pottery Barn*, despite their deliberate avoidance of any obvious pattern book layout, do effect a migration from haute couture to the middle in fashion and furniture.) As with the house plan magazines available on the checkout racks in Home Depot, the designs and styles have not so much traveled from high to low but indeed originated from and remain in the vernacular culture. Present-day pattern books illustrate designs and plans of middle-brow culture (referencing no coexisting high production), to be built from the mainstream manufacturer’s

methods and materials that are also advertised therein.

This indeed became a more technical order of ideas than those that were once only handed down through tradition. But the technical has an effect similar to the traditional. It is still regulated knowledge of building. For the client, the range of aesthetic choices and some building types increases, but remains limited by if not codified by the printed technical order. The length to which a private client will go in building completely as he wishes remains strictly controlled not only by the guidance of some pattern book, but by the technical rights of people and their buildings on adjoining lots, and the expectations of the community as a whole. For these rights and expectations have also been systematized, into unviolatable building codes, zoning regulations, community standards, and local restrictions.

If it can be read that the technical order has replaced the moral order in such cases; if the moral consensus of “voluntary” compliance with cultural norms and the rights of others is replaced by codified limits laid down through a consensus of self-interested professionals, landowners, land buyers, builders, municipalities, experts, and code books, the built outcome nonetheless yields a similarly uniform (or “vernacular fabric”) effect. Under such replacement of a system of informal controls with a system of technical, specified controls, there remains the conception of the vernacular as regulated knowledge of building.

(D) An order of dispersed, domain-specific expertise on building. As expert-driven research and its specialized applications, technical advice, building codes, and practices regulate specific building methods, the idea of building itself is broken down into all its constituent parts, to remain there, fragmented—until an architect comes along, saddled of course with the responsibility of putting them together again. The cultural act of innovative Architecture (with a capital A), then, can generally only be seen to “interfere” with any given number of these expert-driven material applications. The more hegemonic aspect of this modern order of technical advice and building codes is not revealed in the study of the commercial and popular iconography as, for example, by Venturi et al.¹⁶ Rather, it is in the advertisement and

¹⁶The modern vernacular is also where the vernacular historian’s stomach becomes a bit weak. A

codification of contemporary material use, such as seen in the organization of Sweets Catalog, that one finds the dominance of the improved efficiency of the regulated knowledge that is the vernacular today. The general market of building design and production conditioned for the market is a fully classified system of product specifications and applications, of building experts and codes, a streamlined improvement over the more clumsy systems of cultural control that preceded it. Though they are presently marketed and advertised, or handed out and administered coldly as building codes, whereas once they were passed down as tradition, building controls do remain culturally constructed.

In the general market of building production today, building product manufacturers can appear particularly rooted and omnipresent, while many innovative architects can appear to just momentarily pass through the market with custom proposals and innovations. Aware that their large (economic) investment in the field of building and design can at times be shaped by the cultural changes and innovations proposed by innovative architects, manufacturers can perceive

limitation of vernacular history writing is its tenderfoot and tentative approach around the present, where commercial and popular building vernaculars seem to go underappreciated in the discourse, save by the likes of J. B. Jackson, his followers, and other cultural geography that deals with the present shape and iconography of the commercial environment. See Rapoport, *House Form and Culture*, 7–8; and Rapoport, “Defining Vernacular Design,” in *Vernacular Architecture: Paradigms of Environmental Response*, 101. This research is confident and self-assured concerning historical vernaculars, but always more tentative as to what the implications of the same line of reasoning might be at present. Rapoport’s reticence to apply his sound line of reasoning to the present seems to me to be regrettably tied to his opinion that the present vernacular state suffers, much like the avant-garde architectural work for which he has already expressed contempt, from a premium on originality, which is seen as antithetical to things vernacular (see Rapoport, *House Form and Culture*, 7). This supposed premium smacks of the bad taste left by the prevalent concentration on avant-garde or high design traditions that such historians do not intend to study. Conceptions of the modern vernacular as roadside architecture, or the industrial production of buildings, it seems, conjure up the conditions that have done much to destroy the past folk traditions of the vernacular on which vernacular historians ground much of their work. But I must point out that “originality” is confused and conflated with “popular” in this conception. The manufacturer’s vernacular, as we shall see, is surely “popular” but by no means “original” nor striving toward “originality,” as commercial advertising and roadside architecture seem to strive. The manufacturer’s vernacular must remain very controlled, as regulated knowledge, and not intent on radical originality that would break its tradition of acceptance in the life of the majority. Perhaps the advertising of the manufacturer’s vernacular appears radically original, but that is just the image of it, not its reality.

them to be potentially innovative but transient, uninvested, and thus potentially oblivious and uncommitted to the real impact of their proposed changes on manufacturers' livelihoods.

Whether these are just impressions each has of the other or can be empirically validated, innovative architect-manufacturer interaction must deal with simultaneous attraction and repulsion; the combination of threat and inspiration, ambivalence and disinterestedness, the frequent possibility of talking past one another and the results of acts of miscommunication that spring from these conditions.¹⁷ I take from my reading of Thomas Crow that one "job" of the innovative architects (i.e. the avant-garde) is to invent new rules for building.¹⁸ It has been pointed out by other historians that innovative architects' self-promotion and promotion of their own differences is routine in their manifestos and journals.¹⁹ A question becomes: what, and how practicable, are architect's inventions, and what are the potential benefits and the amount of compulsion placed on manufacturers to expand upon their regulated knowledge.

It is clear that manufacturers follow an agenda that ensures their survival and the survival of their

¹⁷I have made this analysis of avant-garde interaction with the vernacular elsewhere in looking at Reyner Banham's *Theory and Design in the First Machine Age*. While Banham draws a huge distinction between Buckminster Fuller and the European modernist avant-garde of the 1920s (Gropius, Mies, and Le Corbusier) based on material methods, I show how even theoretically opposed arguments about technology are beside the point of revealing the designer's attitude about his position relative to vernacular production. Despite radical theoretical differences (Fuller versus Mies, for example), their attitudes can be found very tightly packed on the same side of the spectrum, wherein the architect is conceived to dominate, control, and reconceptualize vernacular production. Both generated similar problems for the production of their work.

¹⁸The idea of the avant-garde as the research and design wing of the wider culture is attributable to Thomas Crow. See "Modernism and Mass Culture in the Visual Arts," in Benjamin Buchloh et al., eds., *Modernism and Modernity* (Halifax: Press of the Nova Scotia College of Art and Design, 1983).

¹⁹Beatriz Colomina, "Publicity" (on Le Corbusier and *L'Esprit Nouveau*), in *Privacy and Publicity: Modern Architecture as Mass Media* (Cambridge: MIT Press, 1996), 141–200; Rosalind E. Krauss, *The Originality of the Avant-Garde and other Modernist Myths* (Cambridge: MIT Press, 1986); Roland Barthes, *Mythologies* (New York: Hill and Wang, 1972), 139–142; Clement Greenberg, "Avant-garde and Kitsch," in *The Collected Essays and Criticism*, vol. 1, *Perceptions and Judgments, 1939–1944* (Chicago: University of Chicago Press, 1986). Also see Colomina's paper presented at the Philip Johnson Colloquium, New York, February 1996.

proprietary material applications, and these in turn depend upon occasional developments in design, technology, function, and marketing. A manufacturer's products are sometimes made obsolete by newer technology, as much as they are sometimes superseded by changes in need, taste, and advertised desires. Once a building material has come into being and demonstrated its value, it will enter into a cycle of ascending improvements, real or contrived, and at the same time increasing competition. When tangible improvements in technology and function are lacking, manufacturers can take it upon themselves to give their products a semblance of progress by developing arbitrary forms and other superficial elements of change. This is one way in which the vernacular producers themselves regulate knowledge as they continue to create consumers for their products. But when the purpose or market for a product evaporates or is superseded by a newer (or less expensive) method of meeting the same need, the manufacturers' own survival depends on a business move (acquisition, divestment, etc.) or on renewed research, development, and marketing tactics.

None of the cultural codes of building rely on a single architect's or a single manufacturer's approval, yet all acknowledge those codes. As a cultural force the vernacular is a product of human agency. Real people change it and control it, yet it can appear self-perpetuating, or autonomous, over and above the efforts of individual architects and manufacturers to produce things for limited or general consumption and use. At the same time just about any single manufacturer-developed building method that can maintain a market can find its place as part of this regulating knowledge. In a sense it is the marketplace that shapes and sizes the available methods of building. The voice of some majority (social, economic, local) shapes the marketplace and transmits the vernacular methods for their own advantage. These are functionally the same ways and the same reasons for which older forms of the vernacular had been transmitted. As in the older forms, the current form of the vernacular is the voice of some majority, now mediated through layers of marketing, production, and business interests in the general market of building. As a hegemonic imposition of cultural codes of building on all individuals in the general market, it is accurately and adequately described simply as our system of regulated knowledge of building.

Selected Bibliography

- Acadia Proceedings*, various. Association of Computer Aided Design in Architecture (ACADIA).
- Althusser, Louis. "Ideology and Ideological State Apparatuses." In *Lenin and Philosophy and Other Essays*. New York: Monthly Review Press, 1971, pp. 158–170.
- Barthes, Roland. *Mythologies*. New York: Hill and Wang, 1972.
- Baudrillard, Jean. "The Masses: The Implosion of the Social in the Media." In *Jean Baudrillard: Selected Writings*, ed. Mark Poster. Stanford: Stanford University Press, 1988.
- Baudrillard, Jean. *On Seduction*. Paris: Editions Galilee, 1979.
- Bourdieu, Pierre. *The Field of Cultural Production : Essays on Art and Literature*. Cambridge, UK: Polity Press, 1993.
- Bourdieu, Pierre, and Loic Wacquant. *An Invitation to Reflexive Sociology*. Chicago: University of Chicago Press, 1992.
- Boyer, Christine M. *CyberCities*. New York: Princeton Architectural Press, 1996.
- Braudel, Fernand. *The Structure of Everyday Life, and Material Life 1400–1800*. New York: Harper and Row, 1982.
- Ching, Francis D. K., Mark M. Jarzombek, and Vikramaditya Prakash. *A Global History of Architecture*. Hoboken, NJ: Wiley, 2007.
- Cohen, Jean-Louis. "The Italophiles at Work." In K. Michael Hays, ed., *Architecture Theory since 1968*. Cambridge: MIT Press, 1998, pp. 508–520.
- Colomina, Beatriz. *Privacy and Publicity: Modern Architecture as Mass Media*. Cambridge: MIT Press, 1996.
- Coyne, R. D., et al. *Knowledge-Based Design Systems*. Reading, MA: Addison-Wesley, 1990.
- Crow, Thomas. "Modernism and Mass Culture in the Visual Arts." In Benjamin Buchloh et al., eds., *Modernism and Modernity*. Halifax: Press of the Nova Scotia College of Art and Design, 1983.
- Cuff, Dana. *Architecture: The Story of Practice*. Cambridge: MIT Press, 1991.
- de Certeau, Michel. *The Practice of Everyday Life*. Berkeley: University of California Press, 1984.
- Deleuze, Gilles, and Félix Guattari. *A Thousand Plateaus: Capitalism and Schizophrenia*. Minneapolis: University of Minnesota Press, 1987.
- Downes, Larry, and Chunka Mui. *Unleashing the Killer App: Digital Strategies for Market Dominance*. Cambridge: Harvard Business School Press, 2000.
- Fiske, John. *Reading the Popular*. Boston: Unwin Hyman, 1989.
- Frank, Thomas. *The Conquest of Cool: Business Culture, Counterculture, and the Rise of Hip Consumerism*. Chicago: University of Chicago Press, 1997.
- Freud, Sigmund. *Civilization and Its Discontents*. New York: Dover, 1994.
- Gershenfeld, Neil. *FAB: The Coming Revolution on Your Desktop: From Personal Computers to Personal Fabrication*. New York: Basic Books, 2005.
- Goldstein, Barbara, Hohn Entenza, and Esther McCoy, eds. *Arts & Architecture: The Entenza Years*. Los Angeles: Hennessey & Ingalls, 1998.
- Greenberg, Clement. "Avant-garde and Kitsch." In *The Collected Essays and Criticism*, vol. 1, *Perceptions and Judgments, 1939–1944*. Chicago: University of Chicago Press, 1986.
- Gutman, Robert. *Architectural Practice: A Critical View*. 1988; Princeton: Princeton Architectural Press, 1997.

- Hall, Stuart. *Critical Dialogues in Cultural Studies*. New York: Routledge, 1996.
- Hall, Stuart, and Paul du Gay, eds. *Questions of Cultural Identity*. Thousand Oaks: Sage, 1996.
- Hebdige, Dick. *Subculture: The Meaning of Style*. 1979; New York: Routledge, 1989.
- International Journal of Architectural Computing (IJAC)*, various. Architectural Computing Alliance.
- Jameson, Fredric. "Architecture and the Critique of Ideology." In K. Michael Hays, ed., *Architecture Theory since 1968*. Cambridge: MIT Press, 1998, pp. 440–461. Paper presented in 1982 to the reading group Revisions; first published in Joan Ockman et al., eds., *Architecture, Criticism, Ideolog.* (Princeton: Princeton Architectural Press, 1985).
- Jameson, Fredric. *Postmodernism, or the Cultural Logic of Late Capitalism*. Durham: Duke University Press, 1991.
- Jarzombek, Mark. "Molecules, Money and Design." *Thresholds*, no. 18 (Cambridge: MIT Dept. of Architecture, 1999), pp. 32–38.
- Jarzombek, Mark. *The Psychologizing of Modernity: Art, Architecture, and History*. Cambridge and New York: Cambridge University Press, 2000.
- Kalay, Yehuda, and Gianfranco Carrara, eds. *Knowledge-Based Computer-Aided Architectural Design*. Amsterdam: Elsevier, 1994.
- Krauss, Rosalind E. *The Originality of the Avant-Garde and Other Modernist Myths*. Cambridge: MIT Press, 1986.
- Kuhn, Thomas. *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press, 1962.
- Lefebvre, Henri. *Everyday Life in the Modern World*. New Brunswick: Transaction, 1984.
- Lefebvre, Henri. *The Production of Space*. Oxford: Blackwell, 1991. (In French, 1974.)
- Marcus, Greil. *Lipstick Traces: A Secret History of the Twentieth Century*. Cambridge: Harvard University Press, 1989.
- McLeod, Mary. "Architecture and Politics in the Reagan Era: From Postmodernism to Deconstructivism." *Assemblage* 8 (February 1989). Reprinted in K. Michael Hays, ed., *Architecture Theory since 1968*. Cambridge: MIT Press, 1998, pp. 680–702.
- Minsky, Marvin. *The Society of Mind*. New York: Simon and Schuster, 1986.
- Mitchell, William. *City of Bits: Space, Place, and the Infobahn*. Cambridge: MIT Press, 1995.
- Mitchell, William. *Computer-Aided Architectural Design*. New York: Petrocelli/Charter, 1977.
- Mitchell, William. *The Logic of Architecture: Design, Computation, and Cognition*. Cambridge: MIT Press, 1990.
- Negroponte, Nicholas. *Being Digital*. New York: Knopf, 1995.
- Negroponte, Nicholas. *Soft Architecture Machines*. Cambridge: MIT Press, 1975.
- Noble, Douglas. "Pitfalls in Software 'Architecting': Some Issues in Transforming Paradigms from Manual to Computer-Supported Methods." *Journal of Architectural Education* 51, no. 3 (February 1998), 166–176.
- Ockman, Joan, et al., eds. *Architecture, Criticism, Ideology*. Princeton: Princeton Architectural Press, 1985.
- Owen, Jon. *STEP: An Introduction*. Winchester, UK: Information Geometers, 1997.
- Rapoport, Amos. *House Form and Culture*. Englewood Cliffs: Prentice-Hall, 1969.
- Redfield, Robert. *Peasant Society and Culture: An Anthropological Approach to Civilization*. Chicago: University of Chicago Press: 1956.
- Resnick, Mitchel. *Turtles, Termites, and Traffic Jams: Explorations in Massively Parallel Microworlds*. Cambridge: MIT Press, 1994.

- Rivoli, Pietra. *The Travels of a T-Shirt in the Global Economy: An Economist Examines The Markets, Power and Politics of World Trade*. Hoboken: Wiley, 2005.
- Saint, Andrew. *The Image of the Architect*. New Haven: Yale University Press, 1983.
- Simmel, Georg. "The Metropolis and Mental Life." In *On Individuality and Social Form*. Chicago: University of Chicago Press, 1971.
- Simmel, Georg. *The Philosophy of Money*. London: Routledge, 1990. (In German, 1900.)
- STEP '97: *Proceedings, Eighth International Workshop on Software Technology and Engineering Practice*. Ed. David Budgen, Gene Hoffnagle, and Joseph Trienekens. Los Alamitos, CA: IEEE Computer Society Press, 1997.
- Stevens, Garry. *The Favored Circle: The Social Foundations of Architectural Distinction*. Cambridge: MIT Press, 1998.
- Tafuri, Manfredo. *Architecture and Utopia: Design and Capitalist Development*. Cambridge: MIT Press, 1976. (In Italian, 1973.)
- Tafuri, Manfredo. *The Sphere and the Labyrinth*. Cambridge: MIT Press, 1987. (In Italian, 1980.)
- Tafuri, Manfredo. *Theories and History of Architecture*. New York: Harper & Row, 1980. (In Italian, 1968.)
- Tafuri, Manfredo. "Towards a Critique of Architectural Ideology." *Contropiano* 1 (January-April 1969). Reprinted in K. Michael Hays, ed., *Architecture Theory since 1968*. Cambridge: MIT Press, 1998, pp. 2–35.
- Tapscott, Don. *The Digital Economy: Promise and Peril in the Age of Networked Intelligence*. New York: McGraw Hill, 1996.
- Turan, Mete, ed. *Vernacular Architecture: Paradigms of Environmental Response*. Aldershot, UK: Avebury, 1990.
- Turkle, Sherry. *Life on the Screen*. New York: Simon & Schuster, 1995.
- Veblen, Thorstein. *The Theory of the Leisure Class: An Economic Study of Institutions*. New York: Vanguard Press, 1922.
- Willis, Paul. *Learning to Labor: How Working-Class Kids Get Working-Class Jobs*. New York: Columbia University Press, 1977.

Diagram 2-1 (Part A) Architecture as a Three-Fold Social Space

		Per O'Brien			
		Architect's Relation to the Production Process	Architect's Use of Materials	Architect's Position On Co-Option And Its Effect	Architect's Political Ideology
FIRST FOLD	ARCHITECTURE AS "CULTURAL" PRODUCTION	Able to Work "Above and Beyond" The Vernacular	Customize Anything	Resist and/or vilify co-option. Steps to stem co-option consist more in the speed of change in styles (ex. haut couture) rather than trademark enforcement	Could be ANY: Conservative to radical
		In A Relationship With The Vernacular	Customize The Conventional Avant-Garde Over-Manipulation Of Off-The-Shelf	Belief in trademark and intellectual property rights. Would protect a trademark, but consumer demand does not support investment in enforcement. Position is "weak" as compared to that of first & third folds. Hopes to influence the vernacular (third fold).	Could be ANY: Conservative to radical
			Use The Conventional Unconventionally Creative Re-Use Of Off-The-Shelf	Failure of belief in trademark and intellectual property rights. Belief in open source; adoption of style rather than birth of one-off creations. Co-option is to be expected, is pointless to do work intended to influence the vernacular (third fold).	Radical or Reform
THIRD FOLD	ARCHITECTURE AS VERNACULAR PRODUCTION	Compliant With The Vernacular	Use The Conventional Conventionally Off-The-Shelf Played "Straight" Follow the conventional wisdom of the "regulated knowledge of building"	All production, no matter how trivial, is protected (trademark, copyright, intellectual property) so that infringement is dealt with through the legal framework. Practiced at developing slight variations of the innovative production of the first & second folds, (i.e. co-opting that production) so that own derivative aesthetic is legal property, protected within the same legal framework.	Conservative

Diagram 2-1 (Part B) Architecture as a Three-Fold Social Space

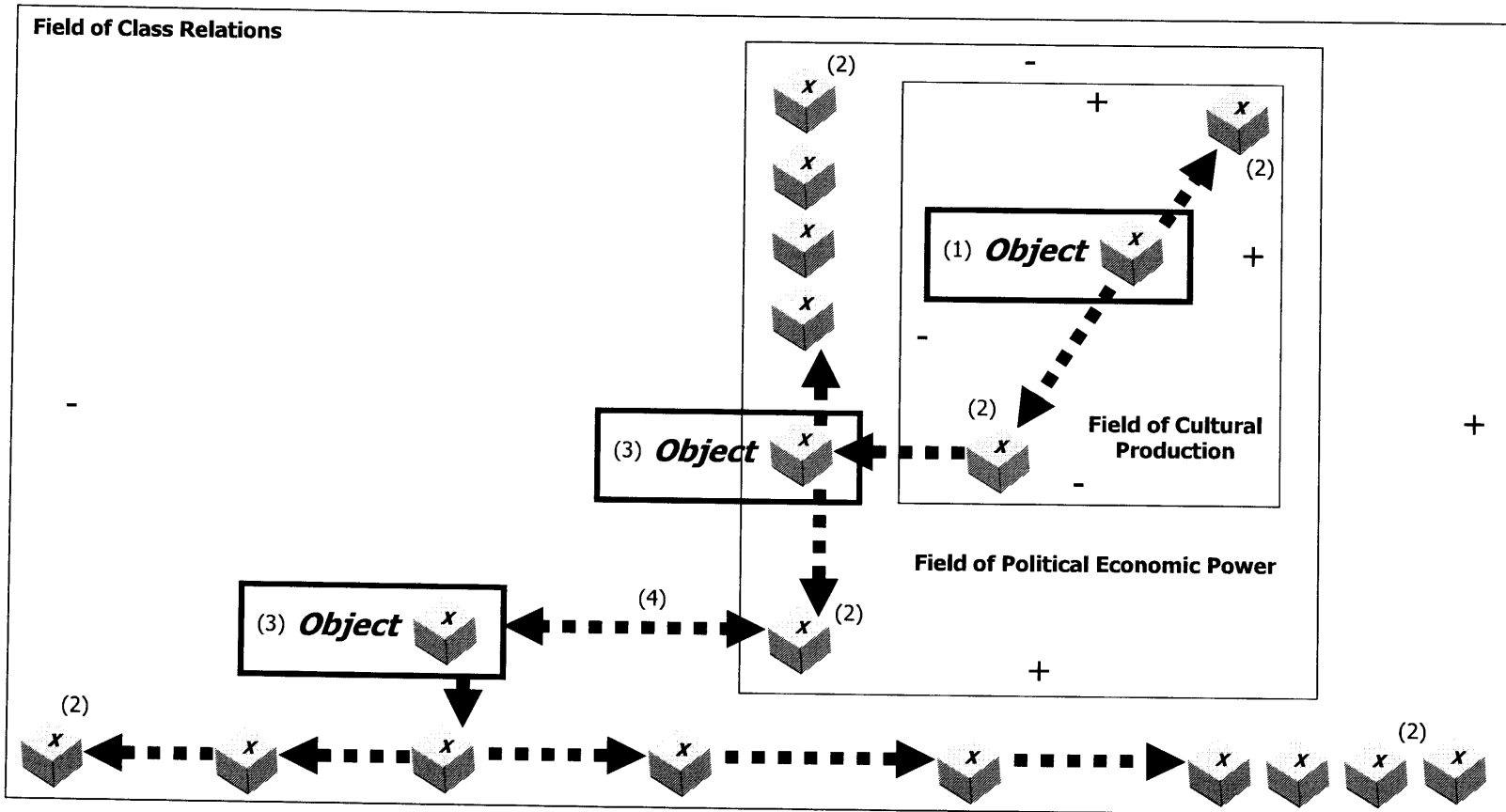
		Per Tafuri (Tafuri is referring to 19-20 th century avant-gardes. Citations from: <i>The Sphere and The Labyrinth</i> , p. 17.)		Per Bourdieu (Citations from: <i>The Field of Cultural Production: Essays on Art and Literature</i> . p. 82, 83, 102, 106, 125, 126-128, and 131.)
		Architect's Relation to the Production Process	Architect's Relation to the Political Economy and Ideologies	Architect's Social Position
FIRST FOLD	ARCHITECTURE AS "CULTURAL" PRODUCTION	Able to Work "Above and Beyond" The Vernacular	PROGRESSIVE: "progressive... avant-garde...proposes a total seizure of the real... clashes with the mediating structures of the consensus" (i.e. existing order) ... rejects every form of mediation ... which in turn reduced it to pure "propaganda"	"DOMINANT PRODUCERS" "art for art's sake" / "auctor" / recognized and with specific capital in the field / non economic production / restricted production / established / fiat date
SECOND FOLD		In A Relationship With The Vernacular	REGRESSIVE: "regressive... avant-garde...opposes commercial reality...opposes the metropolis... attempts to restore "a utopia of nostalgia ...expressed...by all "forms of antiurban" ... communalist thought." REFORMIST: "insists on reform of the major institutions" of "management...development and the construction industry, anticipating...real structural reforms...and new modes of production...new arrangements in the division of labor"	"DOMINATED PRODUCERS" Struggling for recognition, and for specific capital in the field / "Forced to experience the contradictions between aesthetic and political position-takings stemming from their inferior position in the field of production and the objectively conservative functions of the products of their activity" / dominated in the field of cultural production / newcomers / challengers / may be bourgeois or radical / faire-date
THIRD FOLD	ARCHITECTURE AS VERNACULAR PRODUCTION	Compliant With The Vernacular	CONSERVATIVE: "the existing order" "of purely documentary value" structure "of the consensus" "(AU 137): Where industrial design takes a lead position in technological production and conditions its quality in view of an increase in consumption."	"LARGE SCALE PRODUCERS" No specific capital in the field of cultural production that operates "above" them / Production for mass appeal by a "Proletarioid Intelligentsia" / "is a job like any other" / bread and butter work / "quest for profitability and the need for wide or targeted audiences / "middle brow art" / "subordinate position of cultural producers in relation to the controllers of production and diffusion media"


Diagram 2-1 (Part C) Architecture as a Three-Fold Social Space

		Per Stevens (Citations and statistics from: <i>The Favored Circle: The Social Foundations of Architectural Distinction</i> . Table 4.6, Fig. 4.11, Fig. 4.12, pp. 123, 145 and 161.)	Per O'Brien
		Architect's Social Position	Examples Tafuri, Bourdieu, Stevens or O'Brien might cite, per each "fold"
FIRST FOLD	ARCHITECTURE AS "CULTURAL" PRODUCTION	"MAJOR" ARCHITECTS About every other major architect has one budding major architect as his pupil. On average has about one major and one minor architect as colleagues. Has been pupil to about one master, had about one minor architect as a pupil / Constitute about 0.007 percent of 90K total architects in 1980.	Frank Lloyd Wright, William Morris, Geddes, Unwin / Early Postmodernism: AT&T building / Deconstructivist works / Meier / late-Gehry: Disney Hall, Bilbao / Calatrava / Piano & Arup / "Anyone"& Arup / Neo-modernism: Saitowitz, Holl, Smith-Miller+Hawkinson, Williams & Tsien, Herzog, deMureon
SECOND FOLD		"MINOR" ARCHITECTS Have on average only about twenty-five percent the quantity of the social connections to major and minor architects had by "MAJOR" architects noted above / Struggle with both the attainment of symbolic as well as economic capital in their practice / Constitute about 0.08 percent of 90K total architects in 1980.	Le Corbusier: Villa Savoy / Gropius: Bauhaus exterior / modernist ego in mass production (avant-garde assumes R&D role for manufacturers) / Fuller: Dymaxion design for mass production but not for mass consumption / Mies: Seagram facade / Johnson: Glass House, office towers, PPG, Penzoil / LA School 1980s-90s works: Morphosis, Moss, Rotundi, Israel / Wes Jones: Cabin Gropius: pre-fab systems, Le Corbusier: Urbanism projects, American progressives Stein, Henry Wright, Moses, Olmstead. / Eames: house & studio, 1949 / Venturi: bare light bulb in Vanna Venturi House, Football Hall of Fame, decorated sheds / early-Gehry: own house 1979, Indiana Ave Studios, Venice houses / Nouvel: Nemusus 1, 1986 / COA: Brix restaurant / Hodgetts & Fung: Towell library
THIRD FOLD	ARCHITECTURE AS VERNACULAR PRODUCTION	"SUBORDINATE" ARCHITECTS Have on average about zero percent the quantity of the social connections to major and minor architects had by "MAJOR" architects noted above / Essential rewards are monetary gain, as well as pride in a job well done / Constitute about 99.9 percent of 90K total architects in 1980.	Disney Imagineering & Las Vegas theme design / speculative residential, commercial, retail, edge city architecture: Levitt developments and iconography / corporate & retail: Gensler / building product manufacturers systems: modular homes, specialty modular buildings: greenhouses, bus shelters / speculative industrial design (Graves for Target) / Any mass-produced neo-classicism (where many styles and many pasts are pastiched into one style and one past) : from Speer for the Third Reich to Robert Stern's "American House"

Production as a Sphere of Communication: The Point Of View Of The Object

Diagram 2.2

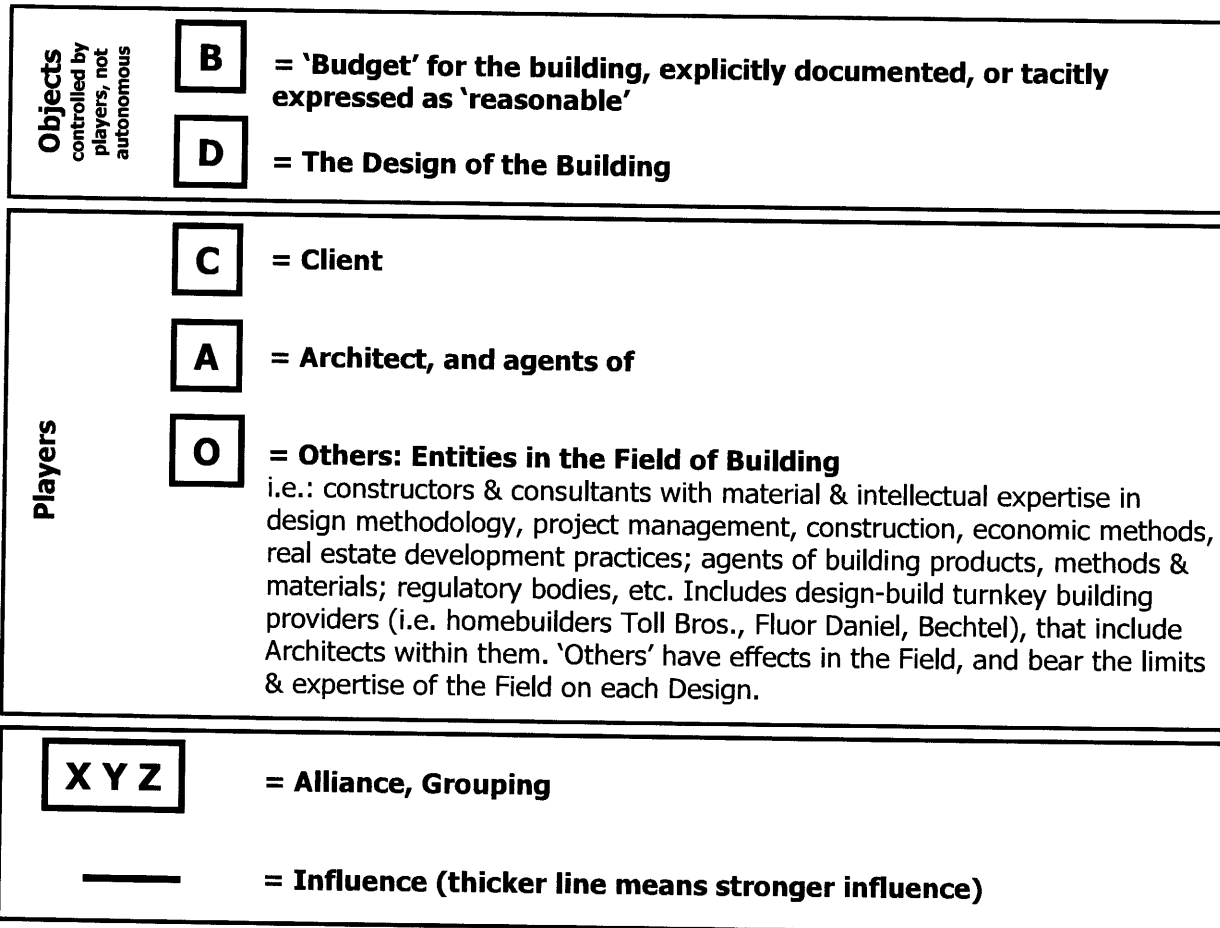


- Key:**  (1) Object "x" = Object recognized as innovative production in the field of architecture, and acquires capital relevant to field.
- (2) The innovation, or portions of it, is co-opted and reproduced by other "folds" in the field (moves towards negative/positive poles of domination, per Bourdieu).
- (3) The innovation, or portions of it, is co-opted and realized as an object in another field. It is produced to acquire capital (political, economic or cultural) relevant to this field.
- (4) Note: objects may originate in any field, and migrate to/from other fields in either direction along the arrow paths shown.

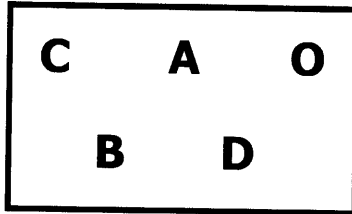
Possible Relationships In Each Building Project

Situation Analysis Circa 2007: Possible Positions And Strategies Of An
Architect In A Given Design Project In The Field Of Building

Key:



Everyone On Same Page.



CHARACTERISTICS: Specific, aesthetic capital of the resultant D usually low, although A's that explicitly advocate this model do so arguing for its cultural capital due to its 'moderating effect on the power of A, (i.e. an historical failure of A's is registered here as the requirement, for the good of design, to collaborate / curb singular influence / get multiple streams of input to create good design.)

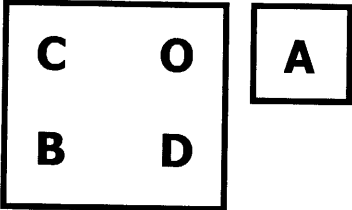
Ex 1: "community design" (co-ops, co-housing, New Urbanism)

Ex 2: Malls/Strip malls, big box retail, corporate office campuses and interiors. SOM under Bunshaft, Gensler. Anti-intellectual deference to economic capital imperatives in building, functional/utilitarian directives of (real or perceived) corporate mantras and interests. (NOTE: material quality does NOT have to suffer...)

Players' "unity" tends to be merely "claimed" or paid lip-service to, by all, as public relations (PR), to get next job.

One Player Isolated. (tends to struggle for project influence while being "out in the cold" for some/all of duration of project.)

Architect Isolated



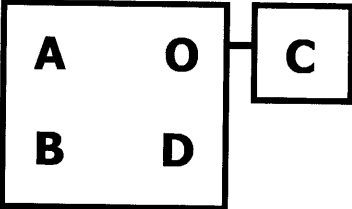
C & O 'on same page.'

'Discrete A is not required, thus a connection to a discrete A is often severed when C fully 'trusts' O.

Exs. Turnkey building delivery. Professional Design-Build. Fluor Daniel, Bechtel.

Frequent cause = C & O teaming up against A

Client Isolated



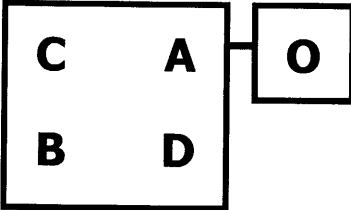
A & O 'on the same page.'

A & O may or may not be 'in it' for the same things, (I.e.: pork-barrel or C-bilking approach; various economic and cultural capital building interests.)

Examples of this model appear in open bid public work (i.e. government-commissioned work for municipalities, airports, etc), where C is represented by 'functionaries' that interface with the building "team" (A,O,D,B). Yet the functionaries' represent by proxy the (suppressed) "building users" (i.e. low-income housing residents, government employees or 'the public').

Frequent cause = A & O teaming up against C

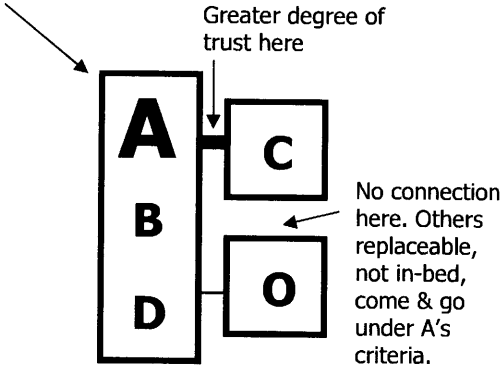
Others Isolated



C & A 'on same page. C may or may not fully know A's intentions/cultural capital invested in the D.

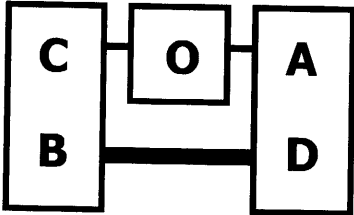
Of note: O may or may not have the opportunity to validate the Budget for the Design. One scenario is that O validates B through painful Change Order process.

Long-term 'successful' A-C relationships often arrive at this A-dominated model:



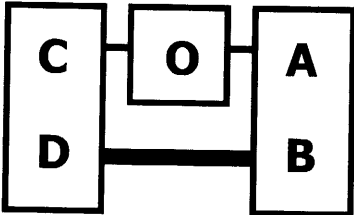
All Isolated. Design and Budget separated and strongly controlled by individuals. Third player is weak 'mediator.'

Client vs. Architect



In this homology, C 'holds onto' B so devoutly that A is obliged (reflexively) to elevate design to same 'status' (importance).

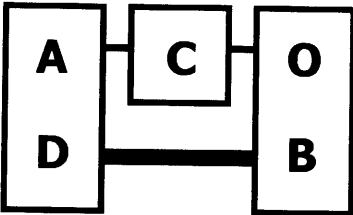
Influence of O often pales in the light of the zealous position-takings upholding the B & D opposition.



Unlikely scenario - A not aligned under D; even when C is. A aligns only with a reasonable 'budget,' regardless of who is aligned with him.

Architect vs. Others

In both cases of this homology, C can be swayed to favor either side, either 'for the duration' or 'case by case' thru the building process.

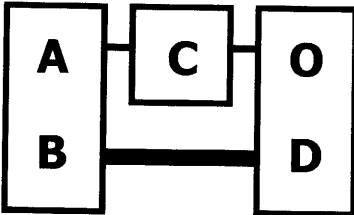


Design Proposals by A in this case rely on asynchronous validation of Budget by non-dominated Others. (i.e. Feasibility of D is at risk)

The fractions (A-D, O-B) zealously claim periodic 'victories' for C, but are split in their motivations: 'constructors, (B-O) as 'building merchants,' creating economic capital, and 'designers,' (A-D) as 'aesthetes' creating cultural capital.

C - contains 'functionaries' to interface with building 'team' (A,O,D,B) and represent (suppressed) building 'users' (i.e. low-income housing residents, government employees and 'the public').

Exs: often experienced when building a winning 'design' competition; jumping from client to client, competition to competition, without any 'patron' relationships. (Exs: Tschumi, Eisenman. Liebeskind, Holl).



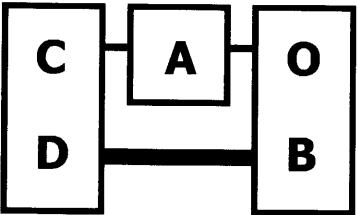
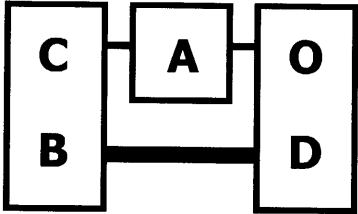
A - is not well-versed in the type of D. Ex: Specialty design (hospital, etc.) by A with no experience in the typology.

Client vs. Others

In both cases of this homology, C 'holds onto' B or D, thus O obliged to hold onto the inverse.

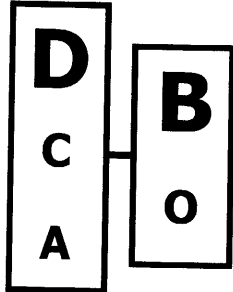
A has little influence, and D is foregone to status quo approaches favored by its holder.

Ex1: C is obliged, legislated, or inexperienced in employment of A. Ex2: A is extremely weak, in actual practice, at occupying a position with power.

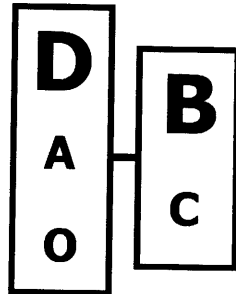


Asymmetrical Teaming, Design vs. Budget. The objects D & B given priority as 'objective' goals. Two players align under D, one under B (or vice versa.) Majority position not necessarily strongest position.

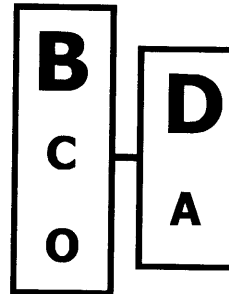
Likely scenarios - A aligns under D (alone or with Client, Others).



Ex: Elite or bourgeois Architect-patron relationship. C selects A based on 'trust' / to produce "A's design", so C defers to A's views.
Ex: C is at odds with O's holding the B mantle.



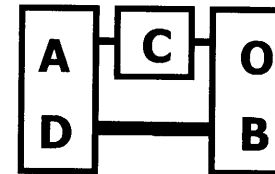
O & A align under D, but their motivation in 'backing' D often not the same / often is manifest in different, conflicting areas of the D. C's endeavors to understand such conflict, cannot prioritize motives, so C can counter only by holding to 'reasonable' budget.



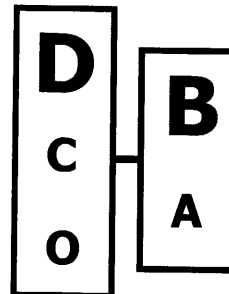
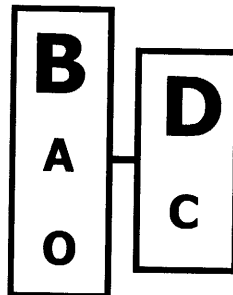
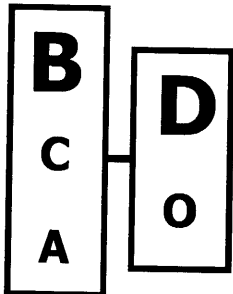
Ex: design competitions where A likely holds unfounded hopes of realizing this position.

Ex: a history of A's paper/unbuilt designs, which influence the field with their cultural capital.

After the effects of such influence is rendered, such an A, in order to build 'for real,' often operates via this difficult mode, jumping from client to client, competition to competition, without any 'patron' relationships. (Exs: Tschumi, Eisenman, Liebeskind, Holl):

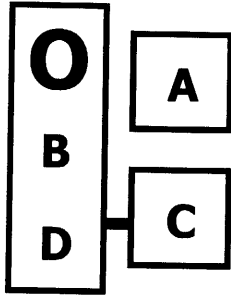


Less likely scenarios - A will not align under D, even when C does. A always for 'reasonable budget.'

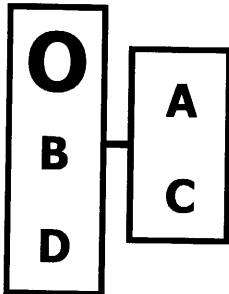


One Player Dominated. One player dominantly 'speaks for' both B & D. Tends to ally or to divide other players.

Other dominated.



Professional Design-Build, turnkey building delivery, where C does not yet fully 'trust' O.
 A – not needed, cut.
 Ex: Fluor Daniel, Bechtel.



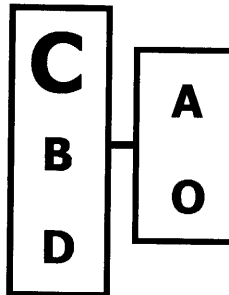
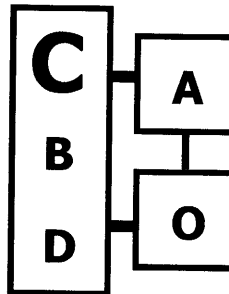
Professional Design-Build, turnkey building delivery, where A – 'consultant' to C.
 Ex: Fluor Daniel, Bechtel, where C does not yet fully 'trust' O.

Client dominated.

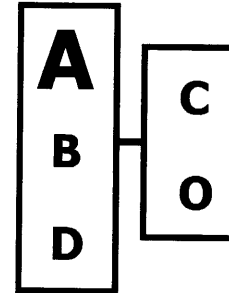
Petit-bourgeois domination, in both cases here where C is not comfortable commissioning or receiving culture-based services ('holds on too tightly').

C – has no relationship with, appreciation for, or apprehension of cultural capital of A, expertise of O.

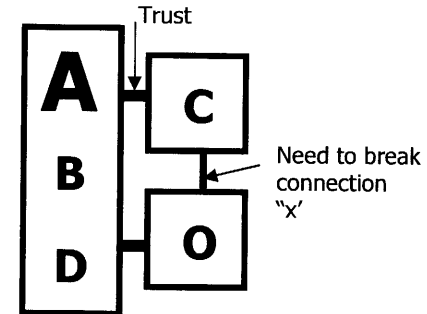
D – is forgone to 'favorite' style of C.



Architect dominated.



A – may perform reasonably, yet O is aligned with/greatly influences C.



C & O have input into B & D, but A manages (is filter for) all input. C's domination of B is filtered by A into 'choices offered' for participation of O's. A needs to keep O away from C.

An application of technology can break connection 'x' so that A is in more desirable position of power in decision-making processes.

Key:

(NYD) = Not Yet Designed

(CSI xxx) = MFGs Product

Diagram 3.1 Visualization / Selling / Decontextualizing Design Needs

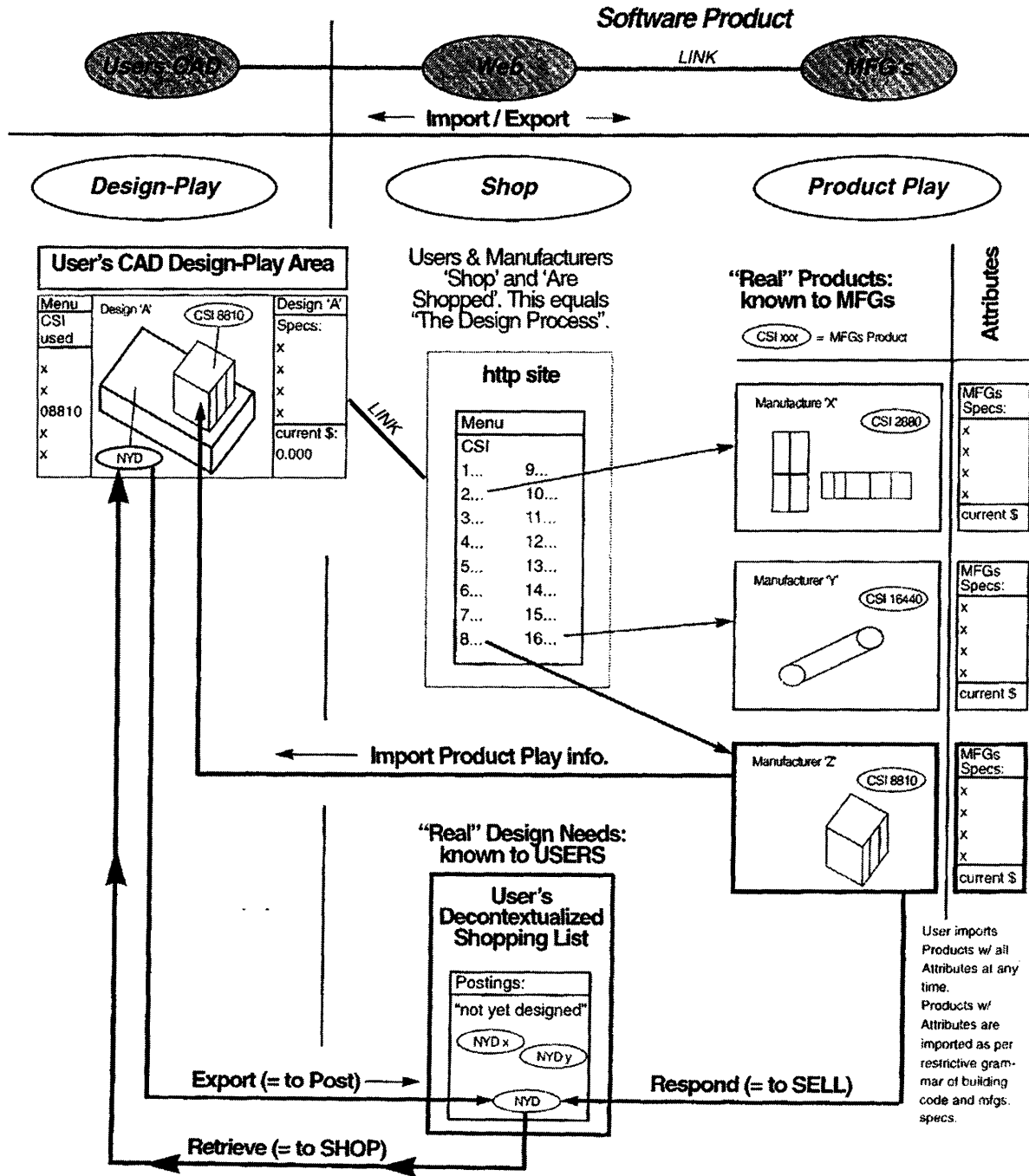


Diagram 3.2

