

Globalization and the Fate of Theory

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“Find capitalism too controlling? No, it’s spontaneous! Too inegalitarian and exploitative? No, it overturns hierarchies! Vulgar, brutal, deskilling and mercenary? Au contraire, it’s creative and fun! Unstable? Nah, that’s just its miraculous dynamism at work!” - Doug Henwood, *After the New Economy*¹

As theory has moved from “critical” to “post-critical”, globalization as a topic has managed to retain its centrality in both, keeping an edge of criticality – it deals in geo-political issues - and a breath of post-ness – it embraces guiltless making in a huge arena. Globalism’s ability to transcend trends in theoretical relevance might seem self-evident: it is an economic, political, and cultural fact that theory (and history) of whatever flavor simply has to confront. But globalization is less fact than ideology and as such obstructs a more nuanced reading of our contemporary condition as well as a more politically-engaged response from the architectural community.

Theoretically, *Empire* by Michael Hardt and Antonio Negri has taught us that global power transcends the nation state and works according to a logic of transnational corporations feeding on markets both big and small, local and universal. Arjun Appadurai has taught us that globalization enters the imaginary as much as it enters into national politics and economics, transforming into identities that are less corrupted than creatively transformed. Keller Easterling has taught us that globalization offers, through its own confusions and inconsistencies, spaces open to subversive architectural operations. Patrik Schumacher has told us that parametrics is the formal expression of globalization’s smooth, all-over content. Manuel DeLanda demonstrates that, as global citizens, we occupy a network arranged around nodes and points of information convergence. Cultural theory in general tells us globalization, unlike Internationalism and modernism, does away with western hegemony. In all of this, globalization looks kind of interesting, creative.

Architectural practice also hears globalization’s siren voice. When there is no work to be had in the US, open an office in China. Feed desirous non-western nations coveting a sign of global arrival with our Western aesthetic. Take advantage of cheap labor, loose zoning, and

¹ Doug Henwood, *After the New Economy* (New York: The New Press, 2005) 37.

unregulated construction to produce buildings only imaginable in the West. Service the economics of luxury that lures the rich to spas in Mongolia and gated “utopias” in the emirates. Outsource the production drawings that can be done more cheaply in developing countries. Incorporate with in situ (far away) architectural firm that can deal with the local codes and contractors so one can concentrate on purely formal goals.

The problem with these outlooks less a lack of criticality than the deflection of attention away from the workings of capitalism. Globalism takes advantage of capitalism, we all know, but, the story goes, it is more pervasive and more historically inevitable. We can be against capitalism but only a luddite would be “against” globalization. Capitalism might be resisted but globalization can only be understood. Globalization appears simultaneously terrifying, fabulous, and fascinating; it is the 21st century version of the sublime.

More recently, however, events pound in; agency is revealed: globalism is a pawn of capitalism. The 2008 recession exposes the fact that globalization is constructed by varied Western governments. Snowden reveals that nation-states do actually work in the realm of power and information. The system allowing illegal and inhumane indentured labor practices is exposed. All feed our impatience with a discourse that no longer, in its undigested form, offers architecture good guidance. Good guidance... we know what that would be: being valued as caretakers of our environment; being compensated for the money we save our clients; proving our expertise as creators of public space and the production of the commons; redirecting developer-driven, free-market systems towards a democratic ordering of the city; sitting at the table of power to determine, not just receive, what and how things get built.

In Part I, this essay reads globalization as an intentional construct of late capitalism/neo-liberalism, used by the developed countries to keep those in power in power. More recently, in the guise of the knowledge economy, neo-liberalism/globalization has found extra rhetoric to support this hegemony. Neo-liberalism/globalization is also shown to be fueled by a rhetoric of consumption - getting the viewer/user/buyer/ exchanger to love the object/system/image/spectacle put before them that blinds us to the real conditions shaping our culture. Consumption deflects attention away from production and the injustices that lie within it.

For architecture, the point of outlining this situation is to redress the desertion of a discourse on design and construction in the belief that issues of labor, making, procurement and management deal most directly with architecture’s access to power. Theory’s inattention to architectural labor is matched by its over-emphasis on the architectural object. Neo-liberalism, it is suggested, has driven architects to obsess over how our designs are bought, sold, and consumed as opposed to how we actually produce them – with fair labor, with community input, with material expertise, with technological innovation and with enlightened management. To

elaborate this point, Part II looks at two seemingly opposing architectural concerns – autonomy and parametric information – to examine how each operates (or could operate) in the future - in a production vs consumption reading of architecture. Autonomy is implicated because it has been the trope used by architectural theory to intellectually (and ideologically) support architecture's role as commodity. Parametric knowledge technologies (BIM and IPD) are implicated in the knowledge economy because they have the capacity to transform architectural design into a collaborative community of knowledge.

Part I: Globalism, Neo-Liberalism, and the Knowledge Economy

The structures of globalization were put in place with the creation of the IMF and the World Bank at the Bretton Woods agreement in 1944, but its principles were not realized at a global level until the collapse of the Soviet Union in 1989. The IMF and World Bank were created post-WWII to ensure the possibility of a reconstituted world economy and were based on the right and obligation of governments to regulate capital flow. The IMF was to regulate currency exchange to facilitate orderly international trade and be the lender of last resort. The World Bank was to lend money to Western European governments to rebuild their nations. Central to the construction of stable economies was linking the various nations economies to the American dollar, itself linked to the gold standard. In 1971, Nixon, in a move to combat 6% unemployment and inflation rates, effectively undid Bretton Woods by delinking the dollar from gold. Besides the devaluation of all the Western economies, their arbitrary, free-floating nature of relative values allowed monetary managers “free to be irresponsible”² and forced nations to invent new forms of global economic dominance.

In 1989, the IMF, in the form of “Structural Adjustment programs” or SAPs (neo-liberal demands made on the borrowing economies to follow Western neo-liberal rules before loans are given) imposed a free market system on an exhausted Russian economy. The voluntary liberalization of the Indian and Chinese economies in the 90s followed as well, as did the addition of 2 billion Chinese laborers to the global labor supply.³ The result is a “barge economy” in constant search for a port of lowest labor cost. In the downward equalization of wages and the increased competition between nations (as big companies search for “China price”), one begins to accept “the natural rate of unemployment.” Globalization, in this way, challenges the classical, Marxist assumption that all nations can benefit when countries produce items for which they have special capabilities.

² Paul Krugman, *The Gold Bug Variations*; 22 November 1996.

³ See T.I. Palley, “A Labor Perspective on Globalization”, http://library.fes.de/pdf-files/ipg/ipg-2009-2/2-09_a_palley_us.pdf (accessed Sept 23, 2014)

Intertwined with this, beginning in the 70s, was the emergence of neo-liberal policies. Following the oil crisis of 1973 (itself linked to the abandonment of Bretton Woods; when the price of oil was no longer linked to the dollar, the OPEC nations announced that they would attach it to the price of gold, shooting the price of a barrel of oil up from \$3 to \$12), US stagflation (in which both inflation and unemployment are high and economic growth slows down), and the rejection of Keynesian economics with its “supply-side” replacement (the privatization of public property and services), ensured that the beneficiaries of “deregulation” were the transnational corporations and wealthy investors. “Free trade” became a form of corporate protectionism as regulations were seen to be “burdens” on large industries (all in developed countries). The World Bank, itself run by the wealthiest nations, ensured through SAPs that developing countries use Western methods and materials to “grow” before receiving loans.

This is precisely the time when the US became committed to the expansion of consumption as it transitioned from a nation that produced goods to one that produced services. As Susan Buck-Morss has pointed out, similarities of consumer styles came to be viewed as synonymous with social equality; democracy was freedom of consumer choice and to suggest otherwise was un-American. The effect of this reinforced its cause: the wealthy ensured that wages were suppressed as they used capitalism to support their own 1% style of consumption. “To regain dominance the big corporations must provide novelty and innovation in goods and commodities and lead in the world of design and lifestyle, so that affluent consumers can be flattered in knowing themselves to be distinctive from their peers and counterparts on the basis of being able to purchase goods which are made only in small quantities (or batches) and hence more valuable because of this idea of rarity or high levels of ‘design intensity.’”⁴ Since the late 70s, the incomes of families in the top 95% has grown rapidly while those in the lowest 20% stagnate.

Post-industrialization (and neo-liberal privatization) increasingly gets valorized as “the knowledge economy,” a concept developed by corporate gurus as early as the 1990s but more often identified with new social media technologies that exemplify and help proliferate innovation. The knowledge economy is seen to do away with the consumption/production divide - those using social media no longer passively receive information, but produce it - and is presented in utopian terms: produced individually outside of normal “work” structures (think Apple originating in a garage); organized unhierarchically and within flexible collaborations; driven by creativity and self-realization; shaped by expanded topologies of creative participation offered by social networks. In

⁴ See Angela McRobbie, “Reflections on Feminism, Immaterial Labor and the Post-Fordist Regime,” in *New Formations*, 64. http://research.gold.ac.uk/6012/1/Dec201006_nf70_mcrobbie.pdf (accessed September 24, 2014). She references S. Lash and J. Urry, *The Economy of Signs and Spaces* (London: Sage, 1994).

this, various technologies have been assigned a role in effecting a seeming paradigm shift: air travel, computer technologies, new media, internet, mobile phones, just-in-time manufacturing, global production chains, labor outsourcing all assume special status that, supposedly, allows the means of production to be owned by its actual producers.

These attributes, of course, are double edged. The managerial emphasis on individuality means that there is no collective bargaining power. The lack of office-initiated work structures lead to the disappearance of separation between work and leisure as leisure is more and more plied for its “creative” (and monetizable) potential. Social networks reveal themselves to be invasive, open to piracy, and unstable. We work all the time because of the need to compete in the ambiguous realm of “innovation”. And the knowledge firms, for their rhetoric of unfettered locale, are bound to places with stable social infrastructures, a well-educated (if expensive) work force, and secure intellectual property decrees. The latter in particular are manipulated by developed countries to keep developing nations from competing in the area they still have control over. As Mark H Getty, the British businessman and co-founder of Getty Images, puts it, intellectual property “is the oil of the 21st century,”⁵ and the US in particular is not letting it leak. When national economy like that of the US can no longer compete on the basis of the price of goods, these analysts describe, they have no choice but to compete on the basis of “innovation” and “quality.” Intellectual property is a form of market intervention that encourages investment in new products by temporarily holding off price competition, in this case from nations slower to the table. Indeed, “the knowledge economy” can be seen as a conscious plea for US companies to *become* knowledge based firms, not a description of an (inevitable) fact.⁶

Part II – Architecture Theory: Autonomy and BIM/IPD

This more “intentional” reading of globalization does not indicate that architecture will inevitably be a helpless pawn in this ideologically-fuelled context. It merely shows that globalization doesn’t just happen in an agent-free zeitgeist and it doesn’t merely offer innocent

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⁶ See Jaime Stapleton’s, *Art, Intellectual Property and the Knowledge Economy*, <http://www.jaimestapleton.net/downloadrogersoad.html> (accessed August 13, 2014), especially Chapter 5, “The Knowledge Economy and Globalisation,” 212-267.. Stapleton goes on to describe how this scenario is sold to the developing countries as a seemingly “win/win” scenario in which all compete equally and all will benefit. In Stapleton’s analysis of contemporary intellectual property laws, he exposes how the Agreement on Trade-Related Aspects of intellectual Property (TRIPs) are constructed. Central to this is sustaining the illusion that economic differences are cultural differences and that intellectual property merely plays out cultural strengths. Prior to the “emergence” of the knowledge economy, developing nations saw patents as a form of unfair trade competition; the success of TRIPs is that the developed nations sold the “information age” as not a trade issue, but a property issue: sustaining its laws was in this sense not limiting access to equal trade but preventing property from “theft.” As a property issue, laws preserving intellectual property were seen to be good for everyone.

new spatial arenas in which to play. It is meant to sharpen our critical attention such that we are not naive about how architecture can and does function in these forces. The goal is not to “opt out” but to take advantage of and redirect them to more humanitarian outcomes.

What follows then is an examination of two theories of architecture - autonomy and parametric technologies – that offer less and more successful theoretical platforms for this. The first, popular since the late 70s (and thus coinciding with the rise of neo-liberalism), is associated with both the “opt out” strategy and the (unhelpful) ideology of consumption, although it also gives us lessons in architecture’s unique collective authorial potential. The second, in its BIM/IPD version, seemingly resists theorization but in fact, for its link to immaterial labor and knowledge production, necessitates theorization. In this link, one can envision, despite knowledge economy’s use by neo-liberalism, a new emphasis on architectural design’s access to collective, shared intelligence.

Autonomy

For the past 30+ years, the dominant discourse in architecture theory has been that of autonomy. Introduced to architecture in the late 70’s primarily via the work of Manfredo Tafuri, autonomy and its bedfellow, formalism, was a defensive response to capitalism’s all-pervasive usurpation of socially-motivated architecture; in the mid 80’s, when good translations of the work of Frankfurt School scholars, it also became associated with Critical Theory’s examination of aesthetics within a capitalist framework.⁷ In both streams, autonomy came to be associated with an avant-garde freed from the constraints of the economy and able to explore its own formal language. On the one hand, autonomy’s sitting beside globalization in architectural discourse is surprising: globalization discourse puts us in the world; autonomy keeps us out of the world. On the other, it is not surprising: autonomy, like globalization, has moved easily from criticality to post-criticality as its championing of avant-gardeness takes priority over social critique. It is also not surprising because it, too, is linked with neo-liberalism’s interest in private property, objecthood, and the right to exclude. As Jaime Stapleton, the intellectual property theorist, has pointed out, there is a symmetry between the avant-garde’s urge to gamble everything on the future and the globalist, knowledge economy’s emphasis on making ones own products obsolete. But it is also linked, in both modern and post-modern guises, with the authorial genius that has become the hallmark of a consumer society willing to buy a name. When Jeff Koons, in *Rogers v Koons* (regarding Koons’ use of a Rogers’ image “Puppies,” without permission) successfully used as his defence the doctrine of “fair use” on the grounds of “valid conceptual reasons,” the rationale not only kept intact property rights (both his and Rogers), but reinforced the triumphing

⁷ For example, Theodor Adorno and Herbert Marcuse; also, writing on autonomy and the Frankfurt School, Peter Burger, *Theory of the Avant-Garde* (Minneapolis: University of Minnesota Press, 1984)

of the “real” artist over a wanna-be by arguing that there was a type of super copy right that could, for “the public good” and “valid conceptual reasons,” trump an ordinary copyright. As Stapleton says, “The (Koons’) defence suggested the creation of a hierarchy which would legally separate ‘Artist’ from ‘Artisan’, the ‘higher’ conceptual artist from mass media hack, the museum artist from mass culture, the ‘high’ from the ‘low’.”⁸ The ideological apparatus of post-modernist art, for all of its critique of modernist elitism and genius endorsement, merely in the end reinforced it.

The link between this sustained object/author fixation to a privileging of consumption is not difficult to make. Both are “sold” to as commodities to a newly expanded middle class consumer. Thus, Adorno, the theorist most identified with aesthetic autonomy and the valorization of the high genius made this clear in his 1938 essay, “On the Fetish Character in Music and the Regression of Listening,” an essay about listening and reception; about how music in capitalist driven cultures is consumed as a commodity. “The fetish character of commodities [the reality of the metropolis] is not a fact of consciousness, but dialectic in the eminent sense that it produces consciousness.”⁹ His disagreement with Walter Benjamin’s “The Work of Art in the Age of Mechanical Reproduction” was precisely Benjamin’s emphasis on production as the link to a work’s criticality. For Adorno, Benjamin’s premise - that a work made by mechanical, proletarian-controlled means offered revolutionary potential - was crude Marxism.

Likewise, Adorno’s closest architectural ally, Peter Eisenman (who has worn the mantle of autonomy most proudly in his consistent search for the essential formal language of architecture) has consistently claimed a lack of authorship as essential to the objects he designs. They produce themselves, the rhetoric goes, out of their formal *raison d’être*. It therefore precludes any examination of how architectural objects are actually produced either by design or construction labor. In lieu of this, consumption happens at two levels: the viewer absorbs the “meaning” of the architectural lesson and, ironically, commodifies the insightful genius who lays claim to higher, non-personal, and transcendent insights.

Michael Hay’s use of Adorno is much more nuanced in terms of how an architect can express criticality and an object express it. But he still upholds the same object-to-viewer paradigm. In his descriptions of the urban subjects that are the audience to Mies van der Rohe’s and Ludwig Hilberseimer’s urban projects, he emphasizes the phenomenological effect on the

⁸ Jaime Stapleton describes the potential of appropriation art, a staple of postmodernism, to challenge the essential component of authorial “ownership” in art (and general cultural) practices. He describes how the serious critique of aesthetic private property lodged by Sherrie Levine in her use of appropriated images, a challenge that was endorsed by critics like Rosalind Krass for its dismissal of modernist paradigms of originality and genius, was actually, when it came to the courts, converted to a neo-liberal victory for all that modernism and its formalism stood for. 260.

⁹ Theodor Adorno, in a letter to Walter Benjamin of 1935, in Adorno, *Über Walter Benjamin* (Frankfurt am Main: Suhrkamp Verlag, 1970), 112; as quoted in K Michael Hays, *Modernism and the Posthumanist Subject* (Cambridge, MA: MIT Press, 1992), 190.

viewer by the designs of these architects, effects that throw the human subject into question. “Against the autonomous, formal object of humanism in which the viewer can grasp in purely mental space an antecedent logic, ... the alternative posited by Mies is an object intractable to decoding by an analysis of what is only immanent and apparent.”¹⁰ In this reading, Hays follows both Adorno and Georg Simmel in a discourse that privileges the affects of the capitalist city on its inhabitants/consumers. Hays is not original in this privileging of the consumer. It is just that Simmel and Adorno were part of a generation that experienced the new effects of capitalism on the consumer, the new urban flaneur. Hays has no such excuse, especially since the architects he examines make claims to the primacy of how their buildings were produced. While Hillberseimer says of Mies’s buildings, “Form and construction have become the same thing,” Hays writes, “But it must be recognized that this architecture is really a demonstration of the technical, social, or economic conditions that produced it.”¹¹

Aesthetic autonomy, of course, sits beside social autonomy within the larger “autonomy” discourse. If aesthetic autonomy diverts our attention away from the means and methods fueling neo-liberalism and globalization, social autonomy critiques it. Like aesthetic autonomy, social autonomy proposes a retreat from the exchange of goods that serves the powerful global players but it proposes new paradigms of action to resist globalization. Here autonomy incorporates a number of attributes: a valorization of individual agency, underscoring the belief that the basis for ethical action lies in the autonomy of the actor and the impartiality of his or her reasoning; an anti-consumerist form of practice that spares the subject from the apparatus of commodification; and an emphasis on anti-union, bottom-up organizational mechanisms.

Social autonomy has increasingly infiltrated aesthetic autonomy, offering it a criticality that foregoes the object aggrandizement and replaces it with acts of popular resistance. Jacques Ranciere avoids the division of the aesthetic and the social by positing an “aesthetic regime” found not in the art object but in the “sensorium of experience” shared by a set of potential citizens that provides a political imagination accessing modes of participation to a power structure that has been closed off to them. His aesthetic regime collapses the distinction between “authors/producers” and “readers/consumers”: the sensorium of experience that is art binds the two together. Likewise, Maurizio Lazzarato’s notion of “radical autonomy” also combines the social and aesthetic in identifying the worker as capable of thwarting capitalist definition; his autonomy says that the identity of the worker - infused with affective, collective, and aesthetic intelligence - precedes capitalism and inherently. The author loses its individual dimension and

¹⁰ K Michael Hays, *Modernism and the Posthumanist Subject* (Cambridge, MA: MIT Press, 1992), 187.

¹¹ *Ibid.*, 196.

the audience is exposed to “new modes of seeing and knowing” that is equally collective.¹²

The work of Pier Vittorio Aureli aligns with this both in his concern for a directly socially motivated aesthetic autonomy and in his insistence that there is a “class” of people falling out of political and spatial representation. In his *The Project of Autonomy* and his *The Possibility of an Absolute Architecture*, Aureli approaches architectural autonomy as a mode of citizen resistance. “Autonomy” here relates to both the political attitude shaping citizenship in the city - the automatist Italian worker movement (the refusal to work under capitalist factory organizations) – and the autonomous archipelagos that the urban citizen constructs in the capitalist city. Aureli’s recent work has focused on immaterial laborers, a class that takes on aspects of autonomist worker resistance (but for the “creative class”) and an urban archipelago that has yet to be made for this class. Here, autonomy is no longer the handmaid of neo-liberal spectacle but, rather, it antithetical reflection. Nevertheless, even here, the outcome of this work, socially-motivated as it is, is the housing object. Production (creative labor) shapes the urban citizen, is avoided as a topic that might relate to the actual architects/constructors who would produce that housing.

BIM/IPD

If aesthetic autonomy and the neo-liberalism it supports have deflected attention away from process, it has not been neglected completely. Issues of architectural production in the form of parametrics have been, in the last 10 years, highly visible, initially just in terms of its formal, generative possibilities, now more recently in Patrik Schumacher’s overt linking of it to neo-globalism. But when the same technology re-emerges not as mere formal generator but as a production generator, theoretical interest disappears. At the September 2013 ANY conference at MoMA, “In Pursuit of Architecture,” the four theorists that were asked to respond to the recently completed buildings of ten architects stumbled when confronted with the architects’ stories of getting there largely parametrically-driven buildings built. One can understand why the building industry’s use of parametrics – IPD and BIM – seems thin on theoretical potential; it pertains to practice, not theory; it shines a light on an area that capitalist ideology doesn’t want us to probe and which our discipline is embarrassed to examine. But this apparent thinness masks the elephant in the room: how does our work, beyond its formal consumption, operate in the economy, given that construction forms 4% of our GDP output?. Tools like BIM and processes like IPD addresses our discipline’s relationship to the economy, an area which

We can rehearse BIM’s relationship with globalization: it helps with financial predictions relating to both cost and schedule; it tracks the heavily globalized and increasingly complex supply chain; it communicates with a new kind of client - private equity firms, hedge funds, real

¹² Maurizio Lazzarati, “Immaterial Labor,” Paulo Virno and Michael Hardy, eds. *Radical Thought in Italy: A Potential Politics*.

estate investment trusts and other financial institutions – concerned with yield, safety, performance, and liquidity; it harnesses collaborative processes; it offers new project delivery standards, regulatory restrictions, and project interactions amongst large teams of project specialists. These are all good, but for theory's sake, it is important to consider BIM's role in the knowledge economy. As designers who do not just facilitate construction but offer spatial and organizational knowledge, we need to locate what aspects of the knowledge industry (and its role in neo-liberalism) we can participate in, take advantage of, redirect, and be wary of. We need to see that a discourse of production (and its economies) is not "uncool"; rather, it is a sign of a new resistance to the status quo.

Other design industries have already articulated a critical labor discourse. New media theorists – Tom Keenan, Lisa Gitelman, and Wendy Chun – are now paying more attention to the details of the software and hardware of media technology than to its subjective effects on users, doing so to analyze the Internet's ongoing structural centralization in the hands of a few technically elite people. Graphic designers such as Metahaven examine how the technology behind the computer screen supports a miraculous surface of apparent substance that makes graphic design, in turn, the creation and management of virtual assets. The artist Christine Hill (who "always held the belief that art is labor that deserves proper compensation"), in her ongoing Volksboutique project, has franchised her "thriftstore" installations in numerous countries; in works like *Personnel of 2004-7* Maureen Connor, an artist/organize and a member of the Institute of Wishful Thinking, critiques the labor conditions of the creative class in post-Fordism while exposing the problems of legal and non-governmental mediation. All of these analyze the links between the mechanisms of technology, procurement, management, and personnel in a contemporary world shaped by late capitalism.

With an examination of our own technical, organizational, and aesthetic processes, we, too, can envision a different disciplinary and professional context than the dysfunctional (and a-critical) one we have. In this, BIM is not an essential instigator; it just pushes us more firmly to reconceive our labor/value model, one that could be more effective, powerful, and radically shared. It does so by emphasizing the very characteristics that come from the rhetoric of the "knowledge economy" - collaboration, flexible hours and workspace, extended knowledge, autonomy and self-realization, reconceived class typologies and divisions, youth empowerment, global communication, innovation emphasis, open information sharing, ad hoc and per-project affiliations, entrepreneurialism – while challenging the neo-liberal formulas which the "knowledge" model can fall into. It proposes engagement that potentially offer sites of radical relevance contained in capitalism's auspices.

The theoretical entré here, for both architecture and BIM/IPD, is the framework offered by immaterial labor, associated with the knowledge economy through its championing of labor that

does not produce goods, but distinct from it for its emphasis on the particular *type* of labor that is mobilized and not the type of product (intelligence) yielded. Where the knowledge economy emphasizes science/research and holds up Stanford IT as the paradigm, immaterial labor emphasizes aesthetics; where the knowledge economy proposes patents as the indicator of knowledge valorization, immaterial labor proposes the quality of work embedded in it as the index of its value; where the knowledge economy pushes ingenuity, immaterial labor stresses communication and collective intelligence; where the knowledge economy valorizes white collar work, immaterial labor makes no distinction between white and blue.

Immaterial labor also positions itself differently in capitalism. While the knowledge economy suggests its historical inevitability in capitalism's march from the production of goods to the production of services to the production of knowledge, immaterial labor replaces this teleology with one of immanence, with the ever-present potential of human labor to be creative. This is precisely Lazzarato's "radical autonomy" mentioned earlier; it is the essential autonomy of the worker (and her creativity in it) from the system into which s/he is placed (capitalism). This worker operates as an affect laborer, a sharing member of the multitude. This kind of collective work neutralizes the operations of capitalism because it avoids the privatization of the product; it actually suggests that labor does not equal employment. In this, capitalism is not escaped – it will always shape work's character; rather, it messes with its paradigms.

The logic of immaterial labor emphasizes design and management. Design is the essence of the aesthetic model of production; management is the art of shaping communication and the general intellect into social cooperation. And to thwart capitalist hierarchies, these both need to put normal "employment" relations at risk. Enter BIM's potential in architecture.

With BIM, design changes in both form and content. In form, it invites collaboration with those previously tangential consultants and subs whose knowledge no longer comes after design documentation but whose expertise is essential to defining the limits and possibilities of a design's structure, material, and performance. It implies our willingness to see all of these players as "designers" and the singular and elitist claim to professional "design" entitlement falls by the wayside. Within the architectural office, the younger generation that actually knows the software and controls the levers of information (and hence design input) are no longer relegated to draftsman; they upset traditional hierarchies and the labor abuses that come with it. In content, design no longer implies the shaping the object's form; it implies instead designing the process by which the design and construction comes into being.

In this, management suddenly matters enormously. An odious concept in a discipline that sees itself as renegade, inspired, and discipline averse, management seems antithetical to the vagaries, delicacies, and intimacies of design. But whether we have identified it or not, management already exists, it is just pathetically deployed. Existing office management in the

architectural office is horizontally Taylorized - the linear process of schematics, DD, construction documents, and construction oversight; vertically hierarchical – from star designer to manager to drafter; and chaotic – no guidelines for advancement, no system delineating overtime or benefits, no understanding of sharing rewards, be they kudos or dollars.

In the contemporary context of networked information, the relational aspects of work come to the fore, increasing the dismissal of organizational knowns. Changes in production systems show that it is no longer the efficiency of partial and specialized operations that counts, but the efficiency of the link between the various operations closely related to employees' learning capacity, job redesign, a new communication activity, and the re-ordering of a whole sequence of events. Work increasingly becomes a relational and communicational activity that is based on a process of fostering team responsibility.¹³ As firms are subject to constraints on productivity, employee involvement is not only essential¹⁴ but also quasi-obligatory. Employee involvement is central to the capacity of organizations to compete and innovate. In the new design paradigm, decisions will have to be made as to which design or work planning dimensions can be developed autonomously, which ones should be dependent on others, and which ones ought to be considered together.¹⁵

The shifts in design and management imply changes in structures of profit. If architects endorse the idea that our knowledge is spatial, material, and organizational innovation, we must reconceive our mode of compensation. This begins with the elimination of percentage-of-construction fees that reinforces the disastrous idea that our value resides in the objects we produce and not in the ingenuity that produced it. It not only wrongly places value on the oneness of the object but also, as piece-work, aligns us with the most degrading form of compensation. Marx is clear on this: "Piece-wages therefore lay the foundation of ...the hierarchically organized system of exploitation and oppression."¹⁶ Hourly fees are better – we at least conceive of our work as knowledge timed, like lawyers – but not ideal for its quantification and not qualification of time. Alternatives need to be found. In the Integrated Project Delivery use of the Special Purpose Entity, a type of limited liability company, the owner puts aside an amount of money that is determined by ALL (not just the owner!) to be the project's (emotional, financial, branding, symbolic) worth and its realistic production schedule; the architect and the contractors (and others) provide services at cost so they, in any case, do not lose money. If and when the

¹³ "New Management Forms in the Knowledge Economy?: HRM in the Context of Teamwork and Participation," <http://www.telug.quebec.ca/chaireecosavoir/pdf/NRC03-14A.pdf>

¹⁴ See Danièle Linhart, *La Modernisation des Entreprises* (Paris: La Découverte, 1994)

¹⁵ See Paulo Tombesi's excellent essay on the new form of architectural work implied by BIM in Building in the Future, Peggy Deamer and Phillip G Bernstein, eds, (New York: Princeton Architectural Press, 2010), 117-136.

¹⁶ Karl Marx, *Capital: A Critique of Political Economy*, Vol 1, Part II, (New York: Cosimo Classics, 2007) 605-6.

work costs are lower than the target cost and the project brought in on time, there is a three way split of savings. It is agreed that there can be no lawsuits. Likewise, we could try pay by percentage-of-profit that would identify the value added by architectural intervention, a figure that would not be difficult to identify if records were sought. Or one could form of a publicly traded company that, like tech start-ups, relies on investors banking on the intelligence - beauty, procurement, performance, and maintenance of the built environment – brought by architectural firms.

Alternately, models of compensation to the existing hourly or yearly salary also present themselves for architectural staff as well. Tech industries compete for the best and the brightest and refine their benefits and modes of compensation to balance appeal to and retention of top prospects with firm profitability. Architecture school graduates, despite seven years of expensive education, must no longer present themselves as cheap labor, but as the elaborately trained designers/organizers that they are; firms should offer packages that aim to keep staff long term, not just per project (object). Or, in lieu of flat compensation rates, incentive-driven wages should be considered. Co-ownership, performance-based compensation, “pay-at-risk,” employee stock options, or other firm owner-employee contracts sharing value creation and profit are common in new-economy, knowledge work compensation models. In *Capital*, Marx adds this footnote in his dismissal of piece-work: “Even Watts, the apologetic, remarks: ‘It would be a great improvement to the system of piece-work, if all the men employed on a job were partners in the contract, each according to his abilities, instead of one man being interested in overworking his fellows for his own benefit.’”¹⁷ If we never again want to hear a potential architectural employee say that they accept their getting paid next to nothing because they know the firm they hope to work for earns next to nothing, we need to consider these options.

Conclusion

BIM is not the savior in a proposed deflection of architecture’s abuse by neo-liberalism. It is merely the most concrete platform demanding a change in our work habits, and ANY change in our work habits is positive for making us self-conscious of an existing absurdity. It in any case raises the possibility of a better type of practice, one that satisfies on both the day to day and the aspirational level of work. And what do we aspire to? I can suggest the following: the creation of a mode of production and distribution when the free development of each is compatible with the free development of all; inclusion in the power game, not “autonomy” outside of it; the identification of architects as a part of a collective citizenship of workers that find our shared goals and travails more persuasive than our competitive one-ups-manship. The need to band together,

¹⁷ Karl Marx, *Capital*, vol 1, chapter 21, ftnt. 7; <http://www.marxists.org/archive/marx/works/1867-c1/ch21.htm>

to form our own commons that uses our common and particularly architectural (spatial and organizational) production skills, is how we will move beyond a system that currently promotes spectacle consumption and the internal competition amongst us that supports it.

Globalism needs to be more than understood; it needs to be diverted to the idealist aims in front of us. We should find capitalism's use of it too controlling; we should find it deskilling and mercenary. And we shouldn't be afraid of failing in our resistance to it. If globalism/capitalism usurps our best intentions, we can re-jigger the formula once again. The battle will never be won, but architecture can at least make sure it isn't lost.