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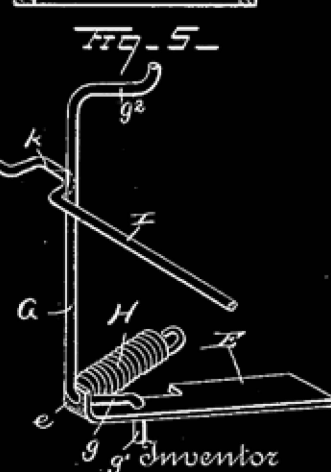
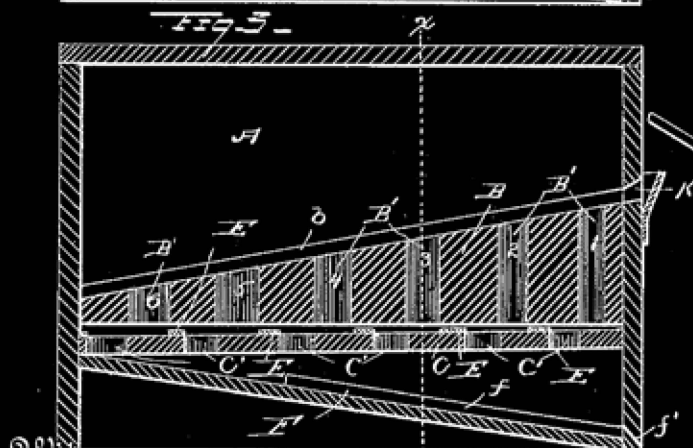
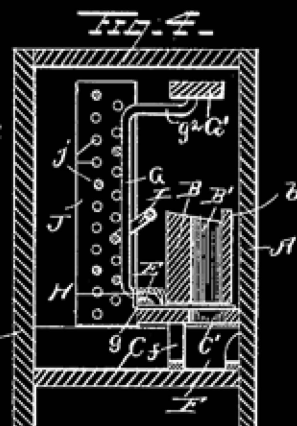
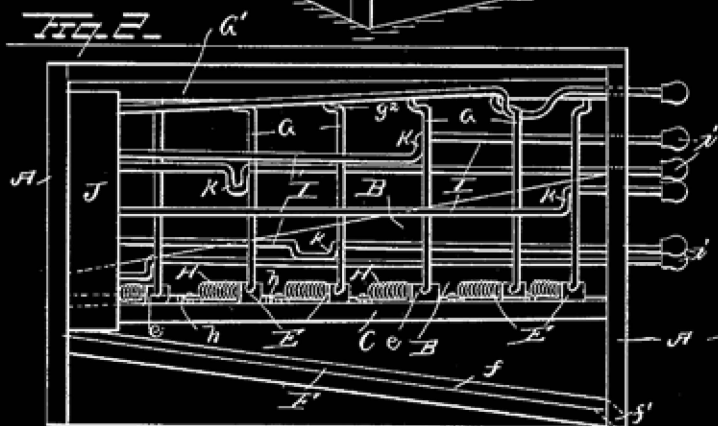
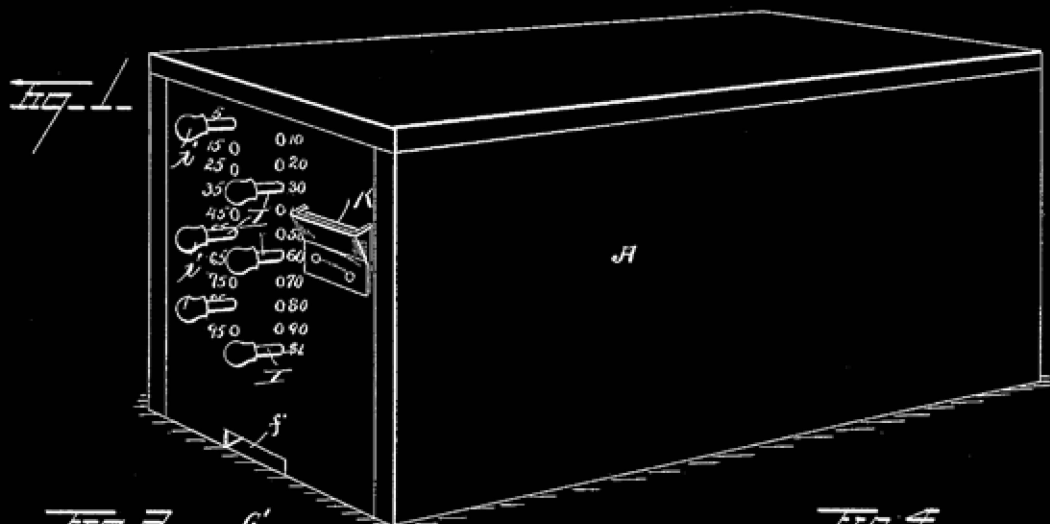
(No Model.)

J. W. GREER.

MONEY CHANGER AND COUNTER.

No. 362,738.

Patented May 10, 1887.



Witnesses

Wm. S. Gill
W. F. Beruhoff

Inventor
John W. Greer
By his Attorneys
C. A. Howard & Co.

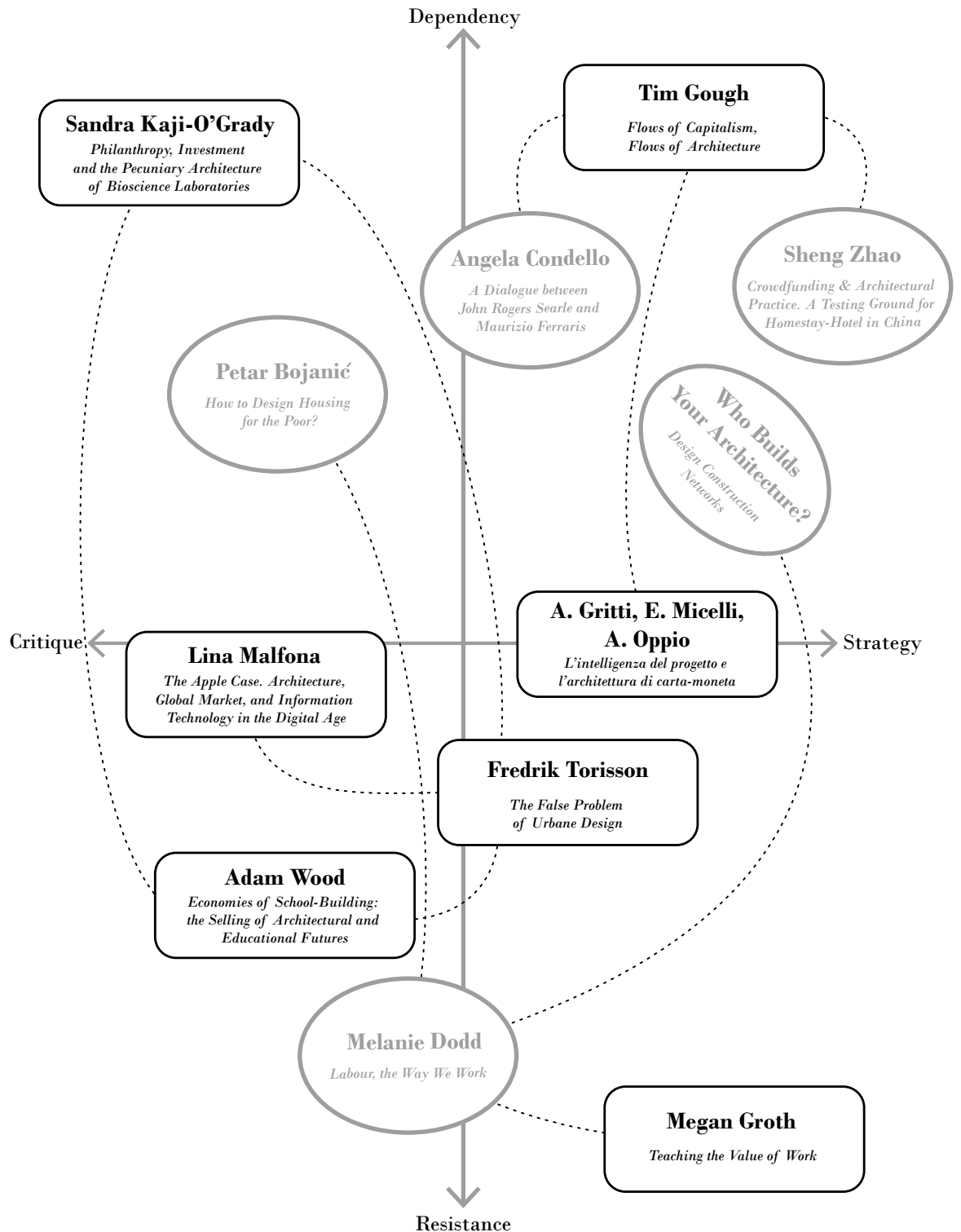
Cover image

J.W. Greer, Money changer and counter, maggio 1887.

Ardeth #03

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Money, or the Elephant in the Room Denaro, o il convitato di pietra

The Editorial Board of "Ardeth"

The theme of this third issue of "Ardeth", *Money: The Economies of Architecture*, explicitly confronts one of the main problems that the journal is concerned with, i.e., the problem of power around the project of architecture. The project of architecture takes on the dimension of money and of economies from many angles, as highlighted by guest editor Jeremy Till in the call for papers. Money can be intended as a social object (money itself), as the set of flows and circulation of entities invested in some form of value that weave projects (evaluations, procedures, negotiations, i.e., that is, networks of exchange), or, again, as the very paradigm of binding or deontic power, embodied through contracts: "an allegory of the human bond," following the definition that Angelo Condello gives in her dialogue with John Searle and Maurizio Ferraris. It seems therefore inevitable that the encounter between theoretical investigations around the project of architecture and this matter should cross the field of critical discourse. Or, at the very least, this is what emerges from the received contributions: authors answered the call for papers primarily by considering money as a problematic matter, one that calls for

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close unpacking in order to denounce inequalities and forms of exploitations, to demystify biased representations, and to unveil latent powers or opaque systems of speculation. Quite differently from what might have happened in a journal dedicated to building management or operations research, none of the authors chose to work on issues of innovation, efficiency, or development of the project of architecture by tackling its economic dimension in its instrumentality and (hypothetical) neutrality. In 2014, the editors of “Perspecta” opened the editorial of the thematic issue of the journal, *Money*, with these words: “There is an elephant in the room. It sits at every client meeting. It chooses every material, sets length of every cantilever.” And again: “formless itself, money forms architecture – but the academic community remains hesitant to broach the subject” (Andrachuck, J., Chrisovalantis Bolos, C., Forman, A., Hooks, M. A., 2014, “Perspecta: The Yale Architectural Journal”). Inside the issue, Peggy Deamer and Phil Bernstein reflected on the very definition of architectural labor as a professional service to be recognized and remunerated – as opposed to the common conceptualization through terms such as *creativity* and *calling* – that is carried out by operators of architectural design services and that ends up making the architectural intellectual effort both a product to be commoditized and the designated victim of competitive pricing pressure. Without taking up those sections of disciplinary debate, the spectrum of contributions in this issue of “Ardeth” paints a picture of quite diverse positions, not only with respect to a set of values that can be debated but is ultimately accepted but especially with respect to the discursive forms that architectural design theory can take, from an ideological critique to pragmatism.

As in the previous two issues, the editorial board proposes a comparative reading map of the contributions. Our hypothesis of distribution – a partial one, and finalized at registering only a stage of the debate – is based on two differential axes. The horizontal axis refers to the form of discourse and distinguishes between critique and strategy. *Critique (pars destruens)* refers to papers that are predominantly critical in their use of case studies or consider the object of argumentation as an element to be deconstructed. *Strategy (pars construens)*, the second form of discourse, features papers that are predominantly categorized by a strategic focus on a hypothesis of reaction to the status quo, a possible way out, or even an operative proposal for the project. The vertical axis refers to the varying conceptions of the power of the project. These, too, can be narrowed down to two categories. *Resistance* refers to the concept that the project of architecture as a tool (and a discipline) is able to take a stand in itself, even in opposition to the institutional nature of processes, of dominant narratives, and of technical, administrative, and economic imperatives. *Dependency*, meanwhile, starts from the assumption that the action of the project of architecture is structurally intertwined with current institutional conditions and with administrative and financial apparatuses from which the power of the project consequentially emerges regardless of unfavorable conditions.

In this reading map, the contributions have been spread out in a complementary fashion to reveal correlations and oppositions that can, we hope, be useful in carrying the debate further.

Kaji-O'Grady describes the world of philanthropic donations to biological research in the USA by underlining the close (and unavoidable) relationship of dependency between architectural work and the symbolic and strategic choices of investors. These billionaires use their money to mold the form and even the function of projects. In a way, the project is looked at from the outside, as if it were a minor and passive component, constrained within an enormous mechanism of concentrated flows of money. Ultimately, these monarchical decisions are accepted in the name of future science and its progress.

In a similar way, **Torisson** focuses on the symbolic and mystifying strength of a future promise (the construction of Studio Building in Malmö) aimed at carrying out urban transformations by avoiding opening the process up to negotiations and controversies that might prove disruptive (and affect efficiency). The project, once again, is described as a passive piece amid strategies decided within settings and roles that are extraneous to architecture: the project is a mere tool, and the architect is a technician ("expert"). In this case, however, the author hopes for a social and participatory turn in which the project of architecture can regain ground and weigh on urban destinies wherever it is possible for it to not merge with neoliberal rhetoric around a falsely harmonizing promise of urban futures.

Malфона writes about the case of a modern paradigmatic building, the Apple Park in Cupertino, reading it in morphological, typological, distributive, and even geographical terms, while also comparing it to similar older buildings. The reference to Tafuri (also present in Torisson's paper) and to his critique of "super-technological monuments" clarifies the fundamentally critical cut of such a reading by interpreting the homologies between the style of the company and the meaning, either deliberate or involuntary, of architecture ("Golden prison or Utopian city?").

A different cut appears in **Gough's** paper, which opens with a strategic question: how can architecture resist neoliberalism? The answer appears in the writings of Deleuze and Guattari and, although rooted in critical theory, attempts to find a propositive direction ("Criticism... is only a preliminary step"). According to the author, it is flows and conditions of relation governing the project – implications, we would like to call them – that work not only as constraints but also as "surplus" and thus as a fundamental lever for the power of the project. Capitalism is only solid in its effects, not as initial substance. The conditions within which economic imperatives are created, the dictatorship of money, emerge time and again through incremental assemblages, within which the same project takes strength and grows tougher by transitioning from the enunciation of fictional futures to the constraining structure of contracts. It is possible, then, to develop project strategies that are able to deviate such

conditions from the inside: “In one sense this is a policy (with Sorkin.) of tactics.”

In a way that is somehow parallel, **Groth** makes an operative proposal as answer to a list of problems regarding the progressive delegitimization and devaluing of architects’ work. In this case, the argument refers to a system of values rather than of structures. The challenge concerns the recodification of architects’ ethics in architecture schools, which should adopt a broader understanding of architectural education. The economic, professional, and personal value form a triad towards a lucid pedagogical program that would allow future architects to learn competence and emancipation in an integrated way.

Wood, as Kaji-O’Grady and Torisson, takes on the issue of promises of the future and their dangerous (but effective) strength in dominating collective narratives around projects of architecture. The case of public–private partnerships for the building of schools in the UK and Italy is explored in detail in order to highlight the connections between speculative strategies and future educational reform models – reform that promises to be innovative and overcome models that are, in turn, simplistically described as obsolete. In the name of a future, unilateral, non-negotiated promise, public programs are colonized by present-day private interests within a system that postpones the payment of the debts that such operations generate. The modes of financing and partnership constitute the terms within which the project, as a process, takes shape and accepts working as mere executive tool. The final proposal, as a consequence, does not exceed the mainly critical cut of the text and is a call for a “humbler, less heroic approach” – one that is more attentive to present conditions.

Gritti, Micelli, and Oppio start from a distinction that, in a way, corresponds to the horizontal axis of our diagram, i.e., the difference between critical autonomy and pragmatic measures (with Michel Serres). While it is presented as deliberately critical, the paper proposes a strictly theoretical strategy that can overcome this distinction through the development of “new ways to represent space.” The authors seem pragmatically oriented to recognize as a given the conditions that are a result of global markets, but they also seem to want to explore forms of integration between the disciplines of the project and those belonging to economic evaluation.

Opening the section of invited authors, **Bojanić** proposes that readers reflect on two key concepts, poverty and dwelling, by reading through authors such as Hegel, Wolff, Engels, Smith, and many others. The framing of the problem of poverty in relation to the social responsibility – or power – of architects allows a positioning of other, critically-oriented contributions by giving a historical perspective running through the whole trajectory of industrial civilization. According to Bojanić, after the first acceleration, the progress of urban reforms slowed down early on, much earlier than the coming of modernism (“There are not many

optimistic protocols in 1872, but the difference from 30 years prior is, it seems to me, far greater, than in the last 150 years”). A provocative solicitation for architects derives from this: to tackle the issue of the power and possibilities around the project of architecture more radically and extensively and to face the challenges of the present day.

Condello, in her dialogue with **Searle** and **Ferraris**, takes on the challenge of framing the ontology of money. This piece is a good description of the vertical axis of our diagram, as the positions of the two philosophers with respect to the existence of the social object called *money* are unequivocally opposite. On the one hand, Searle states that money only exists because there exists a collective intentionality recognizing it; on the other, Ferraris maintains that money is founded on a “deep structure” that is made of inscriptions transcending the intentions of subjects. Within this opposition, Condello recognizes the specters of possible positions that can be assumed with respect to the problem of money as well as to social reality in its entirety, along with the conditions within which power is constructed and maintained.

In the first contribution to the section dedicated to comments, **Dodd** gives an extended review of the *Labour* Symposium, which took place at London’s Central Saint Martins in March, 2018. The piece is both a map detailing a way around many of the matters discussed in the other papers and a geography of a live debate that circles around the issue of architects’ and building construction agents’ work in its various forms of exploitation and mystification.

Finally, the two graphic articles published in this issue differ in form and content, both nonetheless showing some of the possible ways for using the tools of drawing and diagrams to build an argument in the field of architectural design theory. **Zhao** builds a map of the process of financing and building a treehouse through the mechanism of global crowdfunding. In this case, the concrete correlations between network, money, and project actions seem to suggest that it is, in fact, possible to hack capital, as suggested by Gough. On another matter, **Who Builds Your Architecture?** employs the tools of architectural drawing and sequential storytelling in order to reveal the controversial implications that tie the construction of big buildings to the conditions of the exploitation of workers – construction workers as well as designers – giving actual evidence of the issues raised by Dodd. By not stopping at a critical read, “WBYA” proposes a possible action that relies on measurable procedures for each of the problems encountered.

Almost as a postscript, and pulling together some of the threads left hanging on the first issue of “Ardeth”, **Dutto** reviews the seminar Double Crossing that took place at the Architectural Association on May 30th, 2018, as a follow-up to the cycle *This Thing Called Theory* (cfr. Ponzo G., “Ardeth”, 1, 2017); this is a conclusive note underlining the problem of the difficult relationship between theories and practices of architecture, one that is marked by suspicion, unfaithfulness, and two-way betrayals.

L'argomento di questo terzo numero di "Ardeth", *Money: The Economies of Architecture* sollecita in modo esplicito uno dei problemi fondamentali che la rivista intende esplorare, ovvero il problema del potere del progetto di architettura. La dimensione del denaro e delle "economie" investe il progetto da molte direzioni, come messo in luce dal curatore Jeremy Till nella call for papers. "Money" può essere inteso come un oggetto sociale (il denaro stesso), come l'insieme dei flussi e delle circolazioni di entità dotate di valore che intessono i progetti (le valutazioni, le procedure, le negoziazioni: vale a dire le reti di scambi), oppure come il paradigma stesso del potere obbligante, o "deontico", incarnato nei contratti: «un'allegoria dei vincoli umani» – secondo la definizione che Angela Condello enuncia nel corso del suo dialogo con John Searle e Maurizio Ferraris. Sembra pertanto inevitabile che l'incontro tra le indagini teoriche sul progetto architettonico e questo argomento debba attraversare il terreno del discorso critico. O, per lo meno, questo è quanto emerge dai contributi che abbiamo ricevuto: gli autori hanno risposto innanzitutto considerando "Money" come un ambito problematico, su cui era necessario soffermarsi per denunciare disuguaglianze e forme di sfruttamento, demistificare rappresentazioni pacificate, disvelare poteri latenti o sistemi opachi di speculazione. Diversamente da quanto probabilmente sarebbe successo su una rivista di *building management* o di *operations research*, nessun autore si è direttamente occupato di questioni di innovazione, efficienza o "sviluppo" del progetto architettonico, considerando la dimensione economica nella sua strumentalità e (presunta) neutralità. Nel 2014, James Andrachuk apriva l'editoriale del numero monografico *Money* di "Perspecta" con queste parole: "Formless itself, money forms architecture – but the academic community remains hesitant to broach the subject" (Andrachuk, J., Chrisovalantis Bolos, C., Forman, A., Hooks, M. A., 2014, "Perspecta: The Yale Architectural Journal"). All'interno del numero, Peggy Deamer e Phil Bernstein si interrogavano in particolare sulla definizione stessa di lavoro in architettura come servizio professionale da retribuire e riconoscere, nonostante la concettualizzazione idealizzata degli incaricati dei servizi di progettazione, basata sui termini della creatività o della "vocazione", finisca per rendere lo sforzo intellettuale indifendibile rispetto alle logiche dei costi al ribasso. Senza riprendere quei nodi del dibattito disciplinare, lo spettro dei contributi di "Ardeth" restituisce un quadro di posizioni molto diverse, non solo rispetto a un set di valori dibattuto ma fondamentalmente accettato, ma soprattutto rispetto alle forme discorsive che la teoria del progetto architettonico può assumere – dalla critica dell'ideologia al pragmatismo. Come già avvenuto nei precedenti due numeri, la redazione propone una mappa comparativa di lettura degli articoli. La nostra ipotesi di distribuzione, come sempre del tutto parziale, riduttiva e finalizzata a registrare una tappa del dibattito, si basa su due assi differenziali. Il primo asse si riferisce alla forma del discorso, distinguendo tra "critica" e "strate-

gia”: gli articoli prevalentemente “critici” usano il proprio caso studio o oggetto argomentativo come elemento da decostruire (*Critique - pars destruens*); mentre gli articoli prevalentemente “strategici” mettono al centro del proprio discorso un’ipotesi di reazione allo status quo, una via di uscita possibile, o persino una proposta operativa per l’azione di progetto (*Strategy - pars construens*). Il secondo asse si riferisce invece alle diverse concezioni del potere del progetto (per lo meno nella nostra interpretazione): alcuni autori sembrano considerare il progetto di architettura come uno strumento (e una disciplina) capace di affermarsi con le proprie forze, anche in opposizione alla dimensione istituzionale dei processi, delle narrazioni dominanti e degli imperativi tecnici, amministrativi ed economici (*Resistance*). Altri sembrano invece presupporre che l’azione del progetto di architettura sia strutturalmente intrecciata con le condizioni istituzionali vigenti, con gli apparati amministrativi e del capitale, e che dunque il potere del progetto non possa che emergere, al limite, da tali condizioni, per quanto possano apparire indesiderabili (*Dependency*).

In questa mappa, i testi si dispongono in modo abbastanza complementare, rivelando correlazioni e opposizioni che speriamo siano utili ad alimentare la discussione.

Kaji-O’Grady descrive il mondo delle donazioni filantropiche alla ricerca biologica negli Stati Uniti, sottolineando il rapporto di stretta (e ineludibile) dipendenza delle scelte architettoniche dalle scelte simboliche e strategiche degli investitori: il denaro dei miliardari sembra piegare la forma e persino la funzione dei progetti. In un certo senso il progetto è guardato da fuori, come un componente minoritario e tendenzialmente passivo, stretto in un enorme meccanismo di flussi concentrati di denaro e decisioni sostanzialmente monarchiche, prese in nome del progresso della scienza futura.

Anche **Torisson** si concentra sulla forza simbolica e mistificante di una promessa futura (la costruzione dello *Studio building* a Malmö) che serve a condurre a buon fine un processo di trasformazione urbana, evitando di aprirlo a negoziazioni e controversie potenzialmente dirompenti (e meno efficienti). Il progetto, di nuovo, sembra passivo di fronte a strategie e decisioni che vengono prese in ambiti e ruoli esterni all’architettura: il progetto è un mero strumento, e l’architetto è un tecnico (“expert”). Tuttavia in questo caso l’autore auspica anche che, nell’orizzonte di una svolta “sociale” e “partecipativa”, il progetto di architettura possa riguadagnare terreno nell’incidere sui destini urbani, laddove esso sia in grado di non confondersi con le retoriche neoliberiste di una promessa falsamente armonizzante per il futuro delle città.

Malfona affronta il tema di un edificio-paradigma dei nostri giorni, l’*Apple Park* a Cupertino, leggendolo in termini morfologici, tipologici, distributivi e anche geografici, ma anche confrontandolo con modelli altrettanto paradigmatici del passato. Il riferimento a Tafuri (come già in Torisson) e alla sua critica dei “monumenti supertecnologici” esplicita il

taglio fondamentalmente critico di questa lettura, secondo un'interpretazione delle omologie tra lo "stile" della *company* e i significati, programmatici o involontari, dell'architettura («Golden prison or Utopian city?»).

Diverso appare il taglio dell'articolo di **Gough**, che invece apre con una domanda strategica: come può l'architettura resistere al neoliberismo? La risposta, sulla traccia di Deleuze e Guattari, per quanto radicata nella teoria critica tenta di trovare una direzione propositiva («criticism is only a preliminary step»). Secondo l'autore sono i "flussi" e le condizioni di relazione – vorremmo dire le implicazioni – che legano il progetto alle condizioni date, a fungere non soltanto da vincolo, ma anche da "surplus" e dunque da leva fondamentale per il potere dei progetti. Il capitalismo è solido solo nei suoi effetti, e non come sostanza data all'origine. Le condizioni in cui si formano gli imperativi economici, la dittatura del denaro, emergono ogni volta da assemblaggi incrementali, nei quali lo stesso progetto si rafforza e si irrigidisce, transitando dall'enunciazione di azzardi alla struttura obbligatoria dei contratti. È dunque possibile sviluppare delle strategie di progetto capaci di deviare dall'interno queste condizioni: «In one sense this is a policy (with Sorkin) of tactics».

In un modo per certi versi parallelo, **Groth** si indirizza verso una proposta operativa per rispondere a una lista di problemi che riguardano la progressiva delegittimazione e svalutazione del lavoro degli architetti. In questo caso l'autrice parte da una proposta di natura valoriale, e non strutturale. La sfida riguarda la ricodificazione dell'etica degli architetti nelle università, che dovrebbero indirizzarsi verso una più estesa concezione dell'*architectural education*. Il valore economico, professionale e personale compongono una triade per un programma pedagogico lucido, che consentirebbe ai futuri architetti di imparare a sviluppare competenza e capacità di emancipazione in modo integrato.

Wood riprende, con Kaji-O'Grady e Torisson, il tema delle promesse al futuro e della loro pericolosa (ma efficace) forza nell'egemonizzare le narrazioni collettive che accompagnano i progetti. I casi delle partnership pubblico-privato per la costruzione di edifici scolastici nel Regno Unito e in Italia vengono dettagliatamente esplorati per far emergere i nessi tra le strategie speculative e le promesse di una riforma futura del sistema educativo, tutta improntata all'innovazione e al superamento di modelli considerati sbrigativamente obsoleti. In nome di una promessa futura, unilaterale e non negoziata, i programmi di iniziativa pubblica vengono così colonizzati dagli interessi privati del presente, rimandando peraltro al futuro anche il saldo dei debiti che tali operazioni mettono in gioco. I meccanismi di finanziamento e partnership costituiscono i termini in cui il progetto si forma processualmente, prestandosi a diventare mero strumento di esecuzione. La proposta finale, di conseguenza, è un appello per un «approccio più umile, meno eroico» e più orientato al presente, ma non sembra superare il taglio prevalentemente critico del testo.

Gritti, Micelli e Oppio partono da una distinzione che, per certi versi, corrisponde all'asse orizzontale del nostro schema, ovvero la differenza

tra autonomia critica e misurazione pragmatica (riprendendo Michel Serres). Per quanto si annunci come improntato a “una prospettiva deliberatamente critica”, l’articolo propone in effetti una strategia, in termini strettamente teorici, che possa “superare” questa contrapposizione attraverso lo sviluppo di “nuove modalità di rappresentazione dello spazio”. In sostanza gli autori sembrano pragmaticamente orientati a riconoscere come ineludibili le condizioni dettate del mercato globale, ma anche a voler esplorare forme di integrazione tra le discipline del progetto e quelle della valutazione economica.

Apprendo la sezione degli autori invitati, **Bojanić** sottopone ai lettori una riflessione su due concetti chiave, *poverty* e *dwelling*, ripercorrendo autori quali Hegel, Wolff, Engels, Smith e molti altri. L’inquadramento del problema della povertà nella sua relazione con la responsabilità (o potere?) sociale degli architetti mette a fuoco lo sfondo dei discorsi critici precedenti, restituendo una prospettiva storica che comprende tutta la traiettoria della civiltà industriale. Secondo Bojanić il “progresso” delle riforme urbane avrebbe, dopo una prima accelerazione, rallentato molto presto, ben prima dell’avvento del modernismo («There are not many optimistic protocols in 1872, but the difference from 30 years prior, it seems to me, far greater, than in the last 150 years»). Da qui una sollecitazione provocatoria, nei confronti degli architetti, perché riaprano più radicalmente ed estesamente la questione del potere e delle possibilità del progetto, confrontandosi con le sfide del presente.

Condello, nel suo dialogo con **Searle** e **Ferraris**, si fa carico di fornire un quadro sull’ontologia del denaro. Questo testo rappresenta anche una buona descrizione dell’asse verticale del nostro schema, poiché le posizioni dei due filosofi rispetto all’esistenza dell’oggetto sociale “money” si contrappongono in modo inequivocabile. Da una parte Searle sostiene che il denaro può esistere perché esiste una intenzionalità collettiva che lo riconosce; dall’altro Ferraris sottolinea come il denaro si fondi su una “struttura profonda” che è fatta di registrazioni, che trascendono le intenzioni dei soggetti. In questa contrapposizione Condello riconosce l’arco delle possibili posizioni che possono essere assunte di fronte non soltanto al problema del denaro, ma alla realtà sociale nel suo insieme e alle condizioni di costruzione (e mantenimento) del potere.

Nel primo contributo nella sezione dei commenti, **Dodd** fornisce un resoconto del simposio *Labour*, tenutosi presso la Central St. Martin’s di Londra nel Marzo 2018, che è sia una mappa di ricapitolazione di molte delle istanze espresse nei vari articoli, sia la geografia di un dibattito vivo che ruota attorno al tema del lavoro degli architetti e degli addetti alla costruzione degli edifici, nelle sue varie forme di sfruttamento e mistificazione.

Infine, i due articoli grafici pubblicati in questo numero si distinguono per forma e contenuto, ma dimostrano entrambi alcune vie possibili nell’utilizzare gli strumenti del disegno e del diagramma per costruire un’argomentazione nel campo della teoria del progetto architettonico.

Zhao costruisce la mappa di un processo relativo al finanziamento e alla realizzazione di un progetto per una *treehouse*, attraverso un meccanismo di crowd-funding globale. In questo caso le correlazioni concrete tra rete, denaro e azioni di progetto sembrano suggerire effettivamente che sia possibile ripercorrere le trame del capitale in forme alternative – come suggerito da Gough. Su un altro fronte, **Who Builds Your Architecture?** utilizza gli strumenti del disegno architettonico e del fumetto per esplicitare le controverse implicazioni che legano la realizzazione di un grande edificio alle condizioni di sfruttamento dei lavoratori – siano essi operatori edili o progettisti – dando prova evidente delle questioni riassunte da Dodd. Senza limitarsi all’operazione critica, WBYA propone per ciascuno degli aspetti problematici una possibile azione fondata su procedure misurabili.

Quasi come una postfazione, e riprendendo alcuni temi già esplorati nel primo numero di “Ardeth”, **Dutto** ci racconta il seminario Double Crossing che ha avuto luogo presso la Architectural Association il 30 Maggio 2018, come prosecuzione del ciclo *This Thing Called Theory* (cfr. Ponzo G., “Ardeth”, 1, 2017). Una nota conclusiva che sottolinea il problema del difficile rapporto tra teorie e pratiche dell’architettura, segnato da sospetti, infedeltà e tradimenti reciproci.

Editorial.

The Economies of Architecture

Economie dell'architettura

Jeremy Till

The defining virtue of “Ardeth” is that the journal is solely focussed on the projects of architecture. This shifts attention from the visible aspects of architecture, most obviously the production of buildings and the attendant discussions around taste, form and technique. It also moves away from standard narratives of the hero figure of the individual architect who is deemed to have ‘created’ architecture. This is a necessary move because architects are only a small part of architectural and spatial production. Instead “Ardeth” concentrates on the flows of forces, often invisible, that gather before, during and after the moments of architectural creation.

Of all these flows, that of money arguably has the most impact on the projects of architecture and at the same time has remained suppressed in much architectural discourse, at least until very recently. It is as if talking money in some way besmirches the image of architect as artist, floating above the concerns of normal life. The profession has always had a problem in resolving the schism between being a set of businesses against the desired myth of autonomy, with architecture existing in a world set apart. It is easier

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therefore to suppress or ignore the discussion of money, and its power and influence over the profession.

This issue of “Ardeth” is framed to surface the issues of money and architecture’s relationship to economies. It builds on work of scholars such as Peggy Deamer (2015) and Doug Spencer (2016). What their work, and those collected in this volume, clearly show is that the theories and discipline of architecture are always submitted to the forces of global capital. It is only through a better understanding of the way that contemporary economics cuts across architectural operations and projects that one can learn to deal with these dominant forces in a resistive and transformational manner.

The most obvious entanglement of the architectural project with economy is in the way that buildings are costed. In the United Kingdom at least this whole process of costing gave rise to a new profession, the quantity surveyor. Often derided by architects, quantity surveyors take all the complexities of spatial production and reduce them down to a spreadsheet, over which only they have full control. At a stroke the project is wrested from the hands and values of one profession, and from hereon in is overseen by the methods and values of another. Architecture never really recovers from this moment of severe abstraction: as the bottom line spewed out by the spreadsheet dominates the processes of the project, so the architect is left clinging to a few remnants of aesthetics and technique.

In a standard manoeuvre of neo-liberal economics, the spatial project is then effectively outsourced, as the spreadsheet is carved up into smaller and smaller parts which are offered to an atomised market of subcontractors. Where once the architect oversaw the entire process, now they are left swinging in the wind of economic forces controlled by others. What this financialised system of spatial production enforces is a single view of value, reducing buildings to commodities in a chain of exchange. The actual cost of construction, let alone design fees, is far outweighed by the maintenance and operating costs during the lifetime of the building, which in turn are far exceeded by the cost of operating the business during that lifetime. However, because of the urgent imperative for immediate profit, any sense of design contributing to offsetting maintenance or business costs is sacrificed for short-termism.

As long as the neoliberal market keeps its stranglehold on political and economic policies, it will be difficult, if not impossible, for architects to find real points of resistance. Instead, as Doug Spencer notes in his book *The Architecture of Neoliberalism* (2016), the profession (including the academic profession) has become complicit in promulgating the forces of neoliberalism, most notably in the willingness of the architectural elite to have their identities exploited and so commodified.

One therefore needs to look beyond the architectural project as normally defined in order to expose the other invisible forces that are part of the wider spatial project. Recent work by a range of scholars and activ-

ists (many collected together in Melanie Dodd's review in this issue of "Ardeh") has concentrated on the labour that underpins all projects. The structures and manipulations of this labour have rarely entered into architectural discourse or mainstream histories, probably because they interrupt the narrative that the architectural object arrives fully formed, without birth pangs. But it is clear that this standard narrative is a creation myth, constructed to assert the presumed dominance and glory of the architect over the construction world. However, the work of *WBYA?* (Who Builds Your Architecture?), *Contraconductas* and others show very clearly that the profession is enmeshed in the various forms of exploitation and control that the construction industry sets up. In parallel, *The Architecture Lobby* (<http://architecture-lobby.org/>) highlight that the profession is far from free of the precarity and exploitation that characterises the rest of the labour force.

It seems too obvious to say that architects, far from being removed from the machinations of money, are in fact deeply implicated in them, and so should be fully aware of them. Critical theory tells us that ignorance of or, worse, turning a blind eye to dominant forces is the way that one gets ensnared by them. Better then to face up to these uncomfortable truths in order to know better how to deal with them. This issue of "Ardeh" does not presume to present prescriptions for economic action, because engagement with economies entails ethical judgement, and ethics in the post-modern era defy certainty or abstraction. As Zygmunt Bauman (1993: 32) notes, "Human reality is messy and ambiguous – and so moral decisions, unlike abstract ethical principles, are ambivalent". Instead the various contributors bring to the surface thematics that might otherwise have been suppressed; by bringing these concerns to our attention they ask us to position ourselves in relation to them.

The call for papers suggested a number of themes to frame submissions. The first is *Economies of Work*, a topic that this issue covers in some depth. As an educator I am continually reminded of, and disturbed by, the mismatch between the false hopes that are set up for students and the frail economic future that they face. The profession by so fully participating in the economic markets, has left itself exposed. A pincer movement of declining fees in a competitive marketplace and the scope of architectural work being reduced as others have entered the system has meant that the architectural economy has been radically cut in the past twenty years. It may be too late to reverse this situation, but attention to the mechanisms that have given rise to it is a good starting point, as is the assertion of other forms of value in the built environment beyond that of pure financial exchange.

The second theme is *The Economies of Theory*. The so-called "post-critical" turn in architectural theory and practice may be read as at best a pragmatic acceptance of the prevailing economic orthodoxy, and at worst a full-blown complicity with it (Baird, 2004). It is doubtful that Michael Speaks' (2002) contrarian polemic asserting that architectural practice

and theory should align with corporate management practices was taken as a blueprint for action, but it – and others in the same field (Solon, Whiting, 2002) – did sanction a displacement from notions of resistance. Such disavowal of the critical role of theory is simply another sign of capitulation to the brilliant subterfuge that capitalism presents, namely that there is no alternative. Against this, the role of theory has to be reasserted, not in an instrumental manner, but as an imaginary that allows other forms of spatial economy to be proposed and thought through. The third theme is *The Economies of Stuff*. Architecture is at its most basic level about the combination of different forms of matter, of material and products. Construction, to trace its etymology, is an action of piling up (*construere* in Latin means “to pile together”). These bits of matter are then subject to the evaluation of the market and treated as commodities of exchange. Other systems on evaluation sometimes intervene, most notably those of environmental assessment, but even these are subject to the strict measure of quantity so as to be entered into the abstraction of LEED, Passivhaus or BREEAM spreadsheets. Overlaid on all this are the risk-determined curbs of the insurance industry, who rule that an ever-smaller range of materials and products be allowed. A UK architect was recently told by a contractor to get rid of all rooflights because “they leak.” “But, you are installing them,” she protested, “make sure they don’t leak!”, only to be met with the cold stare of risk avoidance. In the face of such curtailment we need to envisage other economies of stuff – those that envisage supply chains beyond the multi-national corporates, those that allow for disassembly and reuse, those that value processes of assembly as much as what is assembled.

The fourth theme is that of *The Economies of Value*. It has become a commonplace to argue that architecture, at least in the 1% version of its stars, is employed to increase the cultural capital, and hence economic value, of global development. The names of those 1% are used as marketing devices, and name alone is enough: what is produced is often of dubious merit. What this shorthand argument ignores is the 99%, who exist below the gaze of the media: sometimes struggling to do the very best they can in constrained circumstances but often simply closed down by value-engineering and the dismissal of any other form of value beyond the economic. Once again, the conceptual and actual constrictions of capital exclude the appreciation or appraisal of other forms of value. We need urgently to bring these other forms of value back to the forefront – to talk of how architecture is bound to forms of social value, of environmental value, of cultural value. Each of these is not mutually exclusive to economic value, so we also need better evidence and argument of how these different forms of value are also consistent with versions of economic value.

The final theme is that of *The Economies of the Future*. With the spectre of the collapse of capitalism haunting much current political debate, we need to start thinking about other economic models and their spatial implications. We asked how such alternative models might inflect on

architectural operations, from the nature of practice to new spatial and material figurations. If answers were not directly forthcoming from our contributors, then that is perhaps an indication of the challenge of the question. But if I have learnt one thing from being part of this issue of “Ardeth”, it is this: we must, really must, believe that other models are possible, and that these other economic forms will produce new social, and hence spatial formations. In this light a priority of the project of architecture becomes one of acting as agent for the spatial imagining and realisation of new economic futures.

La caratteristica distintiva di “Ardeth” è che questa rivista è interamente focalizzata sui progetti di architettura. Ciò sposta l’attenzione dagli aspetti visibili dell’architettura stessa, in particolare la produzione degli edifici e il concomitante dibattito su gusto, forma e tecnica, ma anche dalle comuni narrazioni della figura eroica del singolo architetto, ritenuto il “creatore” dell’architettura. Questo spostamento è una mossa necessaria perché gli architetti sono solo una piccola parte della produzione architettonica e spaziale. “Ardeth”, al contrario, si focalizza sui flussi di forze, spesso invisibili, che si concentrano prima, durante e dopo i momenti della creazione architettonica.

Di tutti questi flussi, quello del denaro probabilmente ha il più grande impatto sui progetti architettonici e, allo stesso tempo, almeno sino a tempi molto recenti, è rimasto sottotraccia in larga parte del dibattito architettonico. È come se parlare di denaro in qualche modo potesse danneggiare l’immagine dell’architetto-artista che fluttua al di sopra delle preoccupazioni della vita di tutti i giorni. La professione ha da sempre avuto difficoltà nel sanare la separazione tra essere un’impresa parte di una catena di affari e il desiderato mito dell’indipendenza, secondo cui l’architettura vive in un mondo a parte.

Questo numero di “Ardeth” è stato costruito per fare emergere la questione del denaro e la relazione dell’architettura con le economie, in linea con il lavoro di studiosi quali Peggy Deamer (2015) e Doug Spencer (2016).

Il loro lavoro, insieme ai contributi raccolti in questo volume, mostra chiaramente che le teorie e la disciplina dell’architettura sono sempre sottomesse alle forze globali del capitale. Solamente attraverso una migliore comprensione dei modi in cui le economie contemporanee attraversano le operazioni e i progetti architettonici si può imparare a trattare con queste forze dominanti con un’attitudine non subordinata e trasformativa.

Il legame più ovvio tra il progetto architettonico e l’economia sta nei modi in cui gli edifici vengono valutati. Almeno nel Regno Unito, questo intero processo di valutazione ha dato vita ad una nuova profes-

sione, il professionista delle valutazioni e dei certificate. Spesso derisi dagli architetti, questi professionisti affrontano tutte le complessità della produzione spaziale e le riducono all'interno di un foglio di calcolo del quale solo essi hanno il controllo. In un sol colpo il progetto è strappato dalle mani di una professione, e dai relativi valori, e da quel momento in poi è supervisionato attraverso metodi e valori di un'altra. L'architettura non riesce mai veramente a riprendersi da questo momento di grave astrazione: dal momento in cui la stringa dei risultati sputati fuori dal foglio di calcolo domina il processo, all'architetto viene lasciato l'appiglio di un po' di estetica e di tecnica.

In uno schema tipico dell'economia neo-liberista, il progetto dello spazio è così esternalizzato, mentre il foglio di calcolo si modella in sezioni sempre più minute, offerte ad un mercato atomizzato di subappaltatori. Dove, un tempo, l'architetto coordinava l'intero processo, lo si lascia oggi in balia delle forze economiche controllate da altri. Questo sistema di produzione dello spazio regolato dalla finanziarizzazione rafforza una visione univoca del valore, riducendo gli edifici a merce in una catena di scambio. Il costo reale della costruzione, per non parlare del costo di progettazione, è di gran lunga superato dai costi di manutenzione e operatività durante il ciclo di vita di un edificio, che a loro volta sono sorpassati dai costi delle attività svolte lungo quel ciclo di vita. Tuttavia, a causa dell'imperativo pressante di profitto immediato, ogni approccio di progetto che potrebbe contribuire a compensare la manutenzione o i costi di gestione è sacrificato alla logica del breve termine.

Fino a quando il mercato neoliberale terrà per la gola la politica e l'economia, per gli architetti sarà difficile, se non impossibile, trovare reali elementi di resistenza. Piuttosto, come nota Doug Spencer nel suo libro *The Architecture of Neoliberalism* (2016), la professione (inclusa quella che opera nell'accademia) è diventata complice nel disseminare le forze del neoliberismo, in modo ancora più sbalorditivo se si considera che le élites architettoniche vedono le proprie identità sfruttate e di conseguenza mercificate.

Per questo si deve guardare oltre al progetto architettonico nella sua accezione corrente, al fine di portare alla luce le altre forze invisibili che sono parte di un più vasto progetto dello spazio. Il lavoro recente di diversi studiosi e attivisti (molti dei quali sono riuniti all'interno del commento di Melanie Dodd in questo numero di "Ardeth") si è concentrato sul lavoro che supporta tutti i progetti. Le strutture e le manipolazioni di tale lavoro sono entrate raramente nel dibattito architettonico o nelle narrazioni tradizionali, probabilmente perché interrompono una narrativa che racconta l'oggetto architettonico come completamente formato, fin dalla sua nascita, senza i dolori del parto.

È chiaro però che questa narrazione comune costituisce un mito della creazione, costruito per affermare la presunta dominanza e la gloria dell'architetto sul mondo della costruzione. Tuttavia, il lavoro di WBYA (Who Builds Your Architecture?), *Contracondutas* e di altri ancora, mo-

stra molto chiaramente che la professione è invischiata nelle varie forme di sfruttamento e controllo messe in campo dall'industria delle costruzioni. In parallelo *The Architecture Lobby* (<http://architecture-lobby.org/>) sottolinea che la professione è lontana dall'essere libera dal precariato e dallo sfruttamento che caratterizza il resto dei lavoratori.

Sembra perfino banale dire che gli architetti, lontani dall'essere immuni dalle macchinazioni del denaro, sono al contrario profondamente implicati in esse e, di conseguenza, dovrebbero essere completamente coscienti di queste stesse macchinazioni. La teoria critica ci dice che ignorare o, ancora peggio, chiudere un occhio rispetto alle forze dominanti è il modo migliore per rimanerne intrappolati. Meglio dunque fronteggiare queste verità scomode per potersi preparare meglio ad averci a che fare. Questo numero di "Ardeh" non ha la presunzione di proporre ricette per l'azione economica, perché l'impegno nel campo delle economie comporta un giudizio etico e l'etica, nell'era post-moderna, sfida la certezza come l'astrazione. Come nota Zygmunt Bauman (1993: 32): "La realtà umana è disordinata e ambigua – e così anche le decisioni morali, al contrario degli astratti principi etici, sono ambivalenti". I vari autori dei contributi, invece, portano in superficie tematiche che sarebbero rimaste altrimenti soffocate. Portando alla nostra attenzione queste preoccupazioni, essi ci chiedono di prendere posizione in relazione ad esse.

L'invito a contribuire suggeriva una serie di temi per inquadrare le proposte. Si cominciava con le *Economie del lavoro*, un argomento che viene approfondito nella rivista. In qualità di insegnante, mi è continuamente evidente, generandomi qualche malessere, la mancata corrispondenza tra le false speranza in cui formiamo gli studenti e il fragile futuro lavorativo che li aspetta. La professione, con una partecipazione così esplicita ai mercati, si è resa vulnerabile. Un movimento a tenaglia tra retribuzioni sempre più ridotte in un mercato competitivo e il perimetro delle competenze dell'architetto, ridotto dall'ingresso di altre competenze nel sistema, ha prodotto una riduzione radicale dell'economia architettonica negli ultimi vent'anni. Potrebbe essere troppo tardi per ribaltare questa situazione, ma un'attenzione al meccanismo che l'ha provocata è un buon punto di partenza, così come lo è l'affermazione di altre forme di valore all'interno dell'ambiente costruito, oltre al puro scambio monetario.

Il secondo tema è *Economie della teoria*. La cosiddetta svolta "post-critica" nella teoria e nella pratica architettonica può essere letta, nel migliore dei casi, come un'accettazione pragmatica dell'ortodossia economica dominante o, nel peggiore, come una complicità in piena regola con essa (Baird, 2004). Si può mettere in dubbio che la polemica controcorrente di Michael Speaks (2002), che afferma che la pratica e la teoria architettonica dovrebbero allinearsi con le pratiche della gestione aziendale, sia stata presa come un programma d'azione, ma essa – insieme ad altre posizioni nello stesso campo (Solon, Whiting, 2002) – ha avallato uno scostamento dall'impulso a resistere.

Questo disconoscimento del ruolo critico della teoria è semplicemente un altro segno della capitolazione al brillante inganno presentato dal capitalismo, ovvero che ad esso non esiste alternativa. Contro tutto ciò, il ruolo della teoria deve essere riaffermato, non in maniera strumentale, ma come un immaginario che permetta ad altre forme di economia dello spazio di essere elaborate e prese in considerazione.

Il terzo tema riguarda le *Economie delle cose*. L'architettura riguarda, al suo livello essenziale, la combinazione di diverse forme di materia, di materiali e di prodotti. La costruzione, se si risale all'etimologia del termine, è un'azione di accumulazione (in latino *construere* significa impilare insieme). Questi pezzi sono successivamente soggetti alla valutazione del mercato e trattati come merce di scambio. A volte intervengono altri sistemi di valutazione, fra tutti si può considerare quello ambientale; anche questi sistemi di valutazione aggiuntivi sono soggetti a strette misurazioni quantitative in modo da essere inseriti nell'astrazione dei fogli di calcolo del protocollo LEED, Passivhaus o BREEAM. In aggiunta a tutto ciò, ci sono le limitazioni determinate dal calcolo di rischio messe in campo dal settore assicurativo, che permette l'utilizzo di una sempre più ridotta gamma di materiali e prodotti. Un costruttore ha recentemente chiesto ad un architetto britannico di eliminare i lucernari perché "Perdono". "Ma li sta installando lei" ha protestato l'architetto, "Si assicuri che non perdano!", con il risultato di essere raggelata dallo sguardo preoccupato del costruttore, interessato ad evitare del tutto i rischi. Dinnanzi a tanta limitazione, abbiamo bisogno di prefigurare altre economie delle cose – quelle che immaginano catene di approvvigionamento diverse da quelle offerte dalle società multinazionali, quelle che permettono lo smantellamento e il riuso, quelle che danno tanto valore ai processi di assemblaggio quanto a ciò che è messo insieme.

Il quarto tema è *Economie del valore*. È ormai entrano nel senso comune sostenere che l'architettura, almeno nell'1% costituito dalle star, è utilizzata per incrementare il capitale culturale e di conseguenza il valore economico dello sviluppo globale. I nomi che costituiscono quell'1% sono utilizzati come strumenti di marketing, e solo il nome è abbastanza: il merito dei prodotti è spesso discutibile. Questo argomento superficiale tuttavia ignora quel 99% che esiste al di sotto dello sguardo dei media: a volte lottando per fare del proprio meglio senza uscire dai limiti imposti, ma spesso, semplicemente, soffocati dal calcolo ingegnerizzato del valore e dalla rimozione di ogni altra forma di valore oltre a quello economico. Ancora una volta le costrizioni reali e concettuali del capitale escludono l'apprezzamento o la comparazione di altre forme di valore. Abbiamo urgentemente bisogno di riportare queste forme di valore in prima linea, per proseguire il dibattito sui modi in cui l'architettura è legata a forme di produzione di valore sociale, di valore ambientale, di valore culturale. Poiché, fra questi valori, nessuno è alternativo al valore economico, di conseguenza abbiamo anche bisogno di una migliore prova e argomenta-

zione di come queste differenti forme di valore siano coerenti con delle concezioni del valore economico.

L'ultimo tema riguarda le *Economie del futuro*. Con lo spauracchio del collasso del capitalismo che perseguita il dibattito politico contemporaneo, abbiamo bisogno di iniziare a pensare ad altri modelli economici e alle loro implicazioni nello spazio. Abbiamo chiesto come tali modelli alternativi possano alterare le operazioni architettoniche, dalla natura stessa della pratica a nuove configurazioni materiali e spaziali. Il fatto che gli autori di questo numero non abbiano risposto direttamente a tali domande risulta un indicatore di quanto questa questione sia spinosa. Ma se ho imparato una cosa dall'essere parte di questo numero di "Ardeh" è questa: dobbiamo, davvero, credere che altri modelli siano possibili, e che queste altre forme di economia produrranno nuove configurazioni sociali e, di conseguenza, spaziali. Alla luce di tutto ciò, una priorità del progetto di architettura diventa quella di operare come un agente per la prefigurazione dello spazio e la realizzazione di nuovi futuri economici.

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Philanthropy, Investment and the Pecuniary Architecture of Bioscience Laboratories

Sandra Kaji-O'Grady

Abstract

New buildings extract and solidify liquid capital, converting it into tangible assets the capital value of which is subject more to the dynamics of real estate and financial markets than it is to architectural fashions. Architecture, however, remains actively engaged in the circulation of capital by enabling pecuniary relationships. This paper is concerned specifically with the relationship between bioscience research organizations and funding bodies and the ways in which architecture functions to attract and influence niche circles of investors and philanthropists. Architecture's role is revealed in the recent architectural commitments and financial activities of two biosciences research institutions: The Cold Spring Harbor Laboratory on Long Island, New York and the J. Craig Venter Institute in La Jolla, California. The nostalgic architecture of the CSHL's Hillside Campus mirrors the taste culture and lifestyles of the old money East Coast families who sit on the CSHL's Board and fund its operations. The JCVI's exploitation of an architecture of environmental sustainability, on the other hand, successfully targets a new breed of biotech entrepreneur.

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Philanthropy constitutes a win-win relationship between donors and receivers, the receiver gains material and financial support, the donor social advantages.

Introduction

The anguished cry of ‘my money not good enough for ya?’ is a familiar cinematic trope. Indeed, its ubiquity suggests the distinction between monetary wealth and the attributes of class, is widely understood, regardless of whether or not one has digested the theoretical musings of Thorstein Veblen or Pierre Bourdieu. Veblen’s analysis looked at how the wealthy at the turn of the last century managed to maintain and accrue more money, not through work, but through careful financial investments made as a result of contacts forged in elite social and leisure settings (Veblen, 1899). Subsequently, in *Distinction* (1984), Bourdieu proposes that if the deployment of tastes in everyday life reproduces social class boundaries, then it is plausible to breach those boundaries through the appropriation of material and cultural signifiers (Bourdieu, 2007). Veblen, too, had observed that wealth does not in itself serve as admission to the upper classes – access depends on the adoption of an acceptable set of values and lifestyles. Those values and lifestyles vary according to whether one’s wealth is self-made or inherited, by race and nationality, and even, more narrowly by city and region. While the self-made *nouveau riche* and the aspirational middle-classes spend on luxury goods, old money invests its wealth on enhancing relationships. Instead of conspicuous consumption, old money favours inconspicuous consumption – spending on services, education, experiences, health, privacy and security. Giving money away is one of those experiences. Not only does it feel good, it strengthens relationships amongst other elites, thereby accruing social capital and distinction. Targeting one’s charitable giving to research and research institutions can also be an investment in the health and education of one’s descendants. The ostensible goal of philanthropy is to advance society by providing the resources for services, such as research, where the state or market have – in the view of the philanthropist – abrogated responsibility. Philanthropy constitutes a win-win relationship between donors and receivers, the receiver gains material and financial support, the donor social advantages. Following Bourdieu’s concept of capital exchange, it is also possible to use philanthropy to convert new money into social and cultural power and, thus, to

integrate oneself into a social group. Philanthropy is a social practice. It defines social distinctions and characterizes the elite. Coming together on the boards of charities and gala fund-raising events is as important in defining cultural capital as attendance at polo matches or membership of sailing and golfing clubs. Philanthropy, though, does more than build social capital. As Adam observes, 'philanthropy always has something to do with power and the shaping of the future of society' (Adam, 2004: 5). In selecting this or that project to support, donors exercise power and this is especially evident in scientific research. Lord Sainsbury of Turville, for example, gave USD108 million (82 million pounds) to fund the construction of the Stirling Prize-winning Sainsbury Laboratory (2010) for plant research at the University of Cambridge. Sainsbury had shares in plant bioscience firms as well as the grocery chain when, as the UK Minister for Science and Innovation in Blair's government, he campaigned for the acceptance of genetically modified food (Giles, 2006). Not all donors are so obviously self-interested but, as Nickel attests, 'the pursuit of ostensible social change through genuine social exclusivity is one of the key practices through which governing takes place' (Nickel, 2016: 13).

Philanthropy is also an economic practice and by-product, for it necessarily arises out of situations in which a small minority of individuals accrue financial excess. Getting rich for Žižek is 'a violent process of appropriation which casts doubt on the right of the rich giver to own what he then generously gives' (Žižek, 2016). That is, philanthropy is a practice that valorizes the wealthy and benevolent subject and addresses a deficit in governing at a time when inequality is pronounced. Ostentatious forms of philanthropy are a kind of disinfectant against possible opposition to wealth concentration and inequality (Nickel, 2016: 26).

Extending this view, it could be argued that philanthropy *produces* the demand for scientific research. Philanthropists need scientific research to mop up financial excess in ways that appear to be altruistic (and at the same time receiving, in most countries, tax concessions). As a consequence, the types of research supported by philanthropy tend to be in fields that have the emotional appeal of 'blameless' beneficia-

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ries, such as childhood cancer, and other translational medical research (Murray, 2013). Philanthropists in the US, Callahan observes, support market solutions and technocratic fixes, thus favoring the latest medical innovation over, say, ensuring decent housing for the poor (Callahan, 2017). With few exceptions, as Murray's statistical analysis reveals, their gifts go to already well-funded wealthy fields and institutions, instead of filling gaps (Murray, 2013). And with dwindling state investment in basic scientific research in the US, Europe and Australia, philanthropic funds and interests play an increasing part in what science gets done. Research institutions in the U.S. received more than \$2.3 billion for basic science research in 2017 from foundations, philanthropists, corporations, and charities, an increase of 40% over the last three years (Science Philanthropy Alliance, 2018). At the same time, according to the National Science Foundation; federal funding of basic science research expenditures at higher education institutions as a percentage of GDP declined 30% from 2003 to 2015.

There are growing concerns that the interests of elite philanthropists are distorting and overly-influencing science, policy, economies, and social change (Fleishman, 2009; Zunz, 2014). Murray wonders how governments and scientists should respond to 'directions spurred by a few wealthy individuals, whose research preferences may be highly idiosyncratic or not well matched with broader social goals' (Murray, 2013). Despite these concerns, contemporary scientific research is increasingly energized by the need to attract private wealth. Hence, the research sector has established considerable infrastructure – staff, events, projects – to solicit philanthropy. This infrastructure aims to establish a personal and emotional identification between philanthropists and research organizations. To understand exactly what this has to do with architecture, we need to look closely at how philanthropy plays out in architectural choices and effects. Campaigns for the construction of new laboratories are typically structured around images and narratives made by architects of a proposed building, fueling the demand for buildings to have an iconic image and an easily grasped story. The two examples in this essay, however, mobilize their existing architecture to maintain and grow support. Images of their buildings and

grounds feature on their websites, annual reports, and other communications collateral. The CSHL offer public tours of their 120-acre site and has celebrated its architecture and landscaped grounds in two lavishly illustrated books (Watson, 1991; Watson, 2008). A detailed forty-page booklet on the JCVI building, with architectural plans and technical information is downloadable from their homepage. The architectural choices made by each organization are used to reinforce their research ambitions, their institutional identities, and their place in the world. More importantly, architecture makes it possible for philanthropists to feel ‘at home’ with an organization, and to see themselves as a part of the scientific community they support.

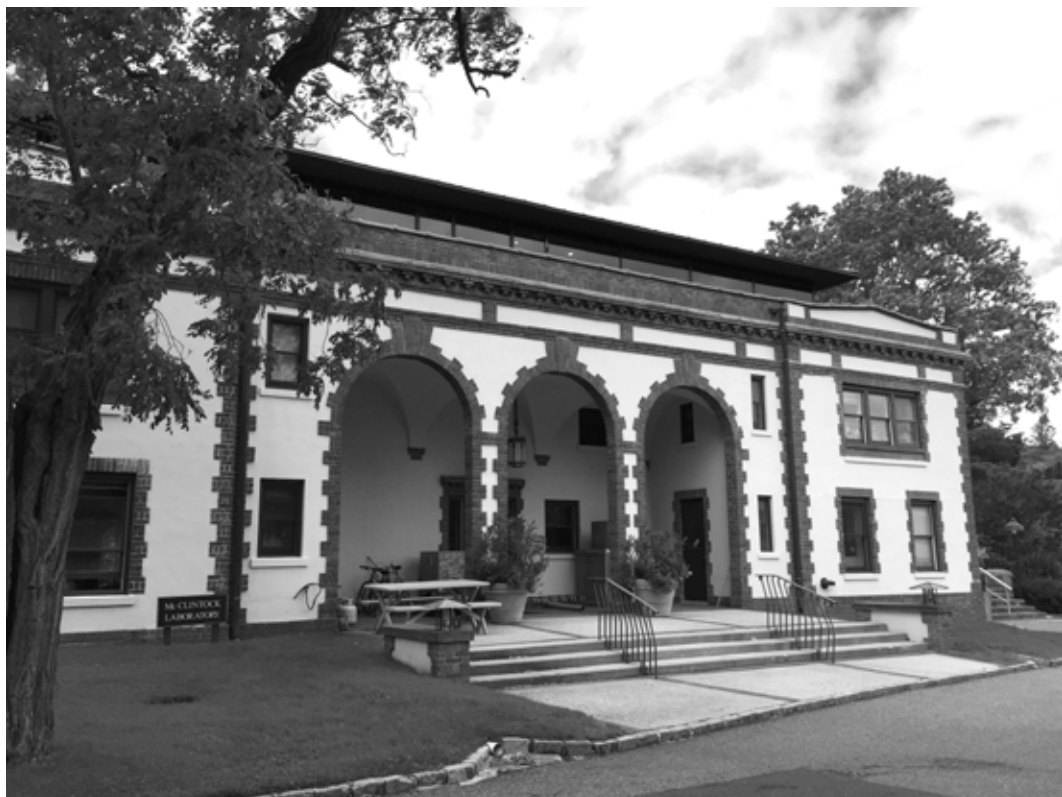
Cold Spring Harbor Laboratory and its Old Money Neighbors

The Cold Spring Harbor Laboratory grew from two co-located but operationally distinct institutions that merged in 1963 – the Bio Lab and the Carnegie Institute. From the beginning, both were conceived, funded and, sometimes, managed by private donors. John D. Jones, Bio Lab co-founder and whaling fortune heir, put up USD5,000 to build a Fish Hatchery and Biological Laboratory there in 1893 – a timber building in the Colonial Revival Style. In 1904, the Jones family foundation, the Wawepex Society, leased ten acres of land for fifty years to the Carnegie Institution of Washington for a Station for Experimental Evolution, under the leadership of Charles Davenport. Davenport promptly built himself a grand house, justifying the expense on the basis that the house made it possible to ‘pay some of the social debts that had accumulated’ (Watson, 1991: 71). It was in this same decade that New York’s wealthy industrialists built their suburban mansions along Long Island’s North Shore coast – a place and a period immortalized in F. Scott Fitzgerald’s novel *The Great Gatsby* (1925). At the turn of the twentieth century, the CSHL’s clambakes, bathing and boating – along with its location amongst the weekend homes of New York’s best families – made the Bio Lab an attractive destination for those who attended its summer research camps.

Nothing, however, marks the historic intersection between the interests of donors and science more

sharply than the CSHL's infamous role as the center of eugenics in North America. Davenport was a leading advocate for social interventions to “improve” the American population, including sterilisation of the mentally-ill and policies against miscegenation and immigration. In 1910, he founded the Eugenics Records Office (ERO), of the Carnegie Institution's Station for Experimental Evolution, with sponsorship from Mary Williamson Harriman, the widow of a railway magnate. Harriman purchased a mid-Victorian timber residence nearby on seventy-five acres (thirty hectares) for the ERO and paid for a new masonry wing. The ERO soon enrolled far greater numbers of students than other courses. (Watson, 1991: 71). Harriman subsequently gifted a new brick building in the Second Renaissance Revival Style and USD300,000 to enable the Carnegie Institution to endow a Department of Genetics at Cold Spring Harbor (Figure 1). The BioLab, which had continued independently of the Carnegie Institution, came under the control of the newly-formed Long Island Biological Association (LIBA) in 1924. Its first President was investment

Fig. 1 - The former Carnegie Institution Building at CSHL. Photograph by S. Kaji-O'Grady.



banker Marshall Fields and its board members included luminaries of New York society, such as William K. Vanderbilt, Childs Frick, Louis Tiffany and Henry W. de Forest. Most of these LIBA directors had residences in the area. Well into the 1960s, a highlight of the annual Symposia was when ‘speakers went to the homes of LIBA members for dinner parties that brought them together with prominent figures in the local community’ (Watson, 1991: 169). Today the LIBA remains a non-profit organization that represents the “friends of the Laboratory”.

In its *2017 Annual Report*, the CSHL reported that its revenue from public support and nonfederal grant awards was USD\$84 million, while its revenue from Federal grants was USD\$34.6 million (Cold Spring Harbor Laboratory, 2017a). Most of its research funding continues to come from private sources. To some considerable extent the research pursued today by its 600 scientists reflects the interests of individuals and philanthropic foundations. Research activities are focused on: the biology of human cancer; understanding neurological and neuropsychiatric disorders such as Alzheimer’s disease, autism, schizophrenia and depression; plant development and genetics that impact crop productivity, biodiversity and the development of biofuels; genomics research in the areas of human genetics, functional genomics, small RNA biology and bioinformatics; and Quantitative Biology.

The relationship between donors and research subjects is perhaps best highlighted by Marilyn and Jim Simons, for whom the Simons Center for Quantitative Biology (SCQB) at CSHL is named. Marilyn Simons is on the board of Trustees for the CSHL and was Vice-President of the Board. Jim Simons first made his name for his research on pattern recognition and the development of string theory. He was a mathematics professor at Stony Brook University before setting up a hedge fund company called Renaissance Technologies, where he redirected his math skills to the stock market. As reported by *Forbes*, his net worth as of February 2018 is estimated to be \$20 billion and he is the wealthiest individual on Long Island (Schachter, 2017). The Simons support basic science research across a range of areas that they argue are underfunded by the state (Lasker Foundation, 2016). They established the Simons Foundation Autism Research

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Initiative in 2003 and donated \$11 million in 2005 to research in this field at CSHL.

The Simons have been instrumental in introducing their associates to the CSHL. Robert Lourie, another CSHL donor, was Head of Futures Research at Renaissance Technologies. He and his wife, Lisa, breed horses and live on the foreshore at Strong's Neck, 26 miles east of CSHL, in a Shingle-style house with gables and dormers. Of giving to local organizations and charities, Lisa Lourie advocates 'You have to tend your nest' (Stony Brook Foundation, no date). She is not alone in holding this conviction. The Simons retired to 26 acres at East Setauket, just east of Cold Spring Harbor (Virtual Globetrotting, 2018). Jamie Nicholls, who was elected Chairman of the Board in 2010, lives with her financier husband at Mill Neck, just three miles (five kilometers) from CSHL and once home to the Vanderbilts, Whitneys, Rockefellers, and Levitts (the developer of Levittown). Charles and Helen Dolan, who own Madison Square Gardens and founded Cablevision and HBO, funded the dormitories at CSHL. They live on the waterfront nearby at Oyster Bay next door to the singer Billy Joel (and where they famously sheltered golfer Tiger Woods in 2010). Mary Lindsay, for whom the child care center is named, lives with her lawyer husband in Laurel Hollow. Donald Everett Axinn, whose name adorns a wing of the Hillside Campus, lived on Long Island with his wife Joan, and was a member of the Sands Point Country Club and the Old Westbury Racquet Club. Donors Jo Ellen and Ira Hazan live at Sands Point.

Of course, other scientific institutions benefit from philanthropy and also use this money to build new research centers. The amounts gifted are extraordinary. Oil and gas producer Bob Belfer and his wife Renée, after whom the Belfer Research Building (2014) at Weill Cornell Medical College in New York is named, gave USD\$100 million to its construction. Phil Knight, co-founder of Nike, gave his alma mater, the University of Oregon, \$500million in 2016 to build an entire new campus for basic scientific research. Ray Dolby's estate gave the University of Cambridge 85 million pounds (US\$112million) in 2017 to build new premises for the Cavendish Laboratory. What is remarkable about the CSHL, however, are the relationships the laboratory has had with its local commu-

nity of supporters for over a century. CSHL's campaign video opens with a view of the campus from across the harbor and a voiceover that says, 'Right in your backyard, researchers at Cold Spring Harbor Laboratory are working tirelessly to find cures for cancer, autism and other diseases. Helping our neighbours on Long Island like Emma Larsen, born with MSA...' (Cold Spring Harbor Laboratory, 2017b) CSHL's donors identify with the organization as one of their own, much as they might their country club. The CSHL is more than a place associated with their philanthropic community, it is a microcosmic reflection of it. Much of its ongoing embrace by the local elite lies with Watson and his architectural predilections.

James Watson, the Philanthropist's Friend

James Watson's association with the CSHL is a long one. In 1953, Watson and Crick made their first public presentation of the DNA double helix at the CSHL annual summer symposium. In 1968, six years after winning the medal for the Nobel Prize in Physiology or Medicine with Frick, Watson married Elizabeth Lewis and became the Laboratory's director. He was appointed the CSHL's President in 1994 and Chancellor ten years later. While his leadership style has been contentious and his statements about race have attracted disapprobation, his ability to garner funds is widely admired. Watson saved the CSHL from ruin in the 1970s with a decidedly personal approach to fund-raising that built on the laboratory's traditional local constituents and his singular reputation. Even his 90th birthday party in April, 2018 was a benefit, raising over \$750,000 towards an endowed professorship at the laboratory.

Watson has, accurately, argued that 'research institutions must have rich neighbors nearby who are inclined to take pride in local accomplishments' (Watson, 2007: 313). This is particular so for an institution that lacks proud alumni nor grateful patients. He has also claimed that as a manager of a scientific research institution, 'You have to like people who have money. I really like rich people' (Strickland, 1993). By his Board member's standards, Watson himself is not rich. According to the CSHL's Schedule O, Form 990-PS submission to the Internal Revenue Service in 2012, Watson's salary as its Chancellor Emeritus

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was US\$384,238. According to *Forbes*, in 2017 Biondi, husband of the Chair of CSHL's Board, is worth US\$1.6 billion, while James Simons is reported to be worth \$18 billion. Louis Moore Bacon, one of CSHL's most generous donors and another local resident, is reputedly worth US\$1.8 billion. Bacon and Biondi each earn more annually than the entire annual payroll of CSHL's 1,256 employees, while Simons could purchase the entire site and its operations. The gap doesn't matter, for Watson intuitively understands Bourdieu's distinction between money and milieu. Watson has made every effort to maintain social continuity between the local elite and the Laboratory's scientists, insisting that 'entering worlds where your trustees relax – joining their clubs or vacationing where they go with their families in the summer, for instance – is a good way to put relations on a social footing. Seeing you as more friend than suppliant will incline them to go the extra distance for you in a pinch' (Watson, 2007: 313).

The Architecture of the CSHL

Watson also recognizes the value of architectural choices in reiterating social and lifestyle continuities between the scientists and the local residents. The commissioning of new buildings in a range of nostalgic, historically-inspired styles, is a critical component of his social climbing. Watson engaged Moore Grover Harper – one of the many professional configurations and practices established by architect Charles Moore over his long career – over four decades ago. CSHL has remained loyal to the firm, now known as Centerbrook Architects and Planners. Centerbrook are housed in an historic compound of nineteenth century mill buildings in Connecticut and claim to be committed to 'enduring aesthetics' and to specialize in 'American place-making and the craft of building.' (Centerbrook, 2018) Their residential work is almost entirely reworkings of historic and vernacular styles, while their institutional and educational projects are more diverse. For other science organizations, such as the Jackson Laboratory for Genomic Medicine (2014), they employ contemporary curtain wall glazing and bold, modernist forms.

Centerbrook's designs for new buildings and alterations on the CSHL campus labor to conceal their

purpose and youth. Indeed, modernist buildings constructed before the arrival of Watson, such as the concrete Demerec Laboratory of 1953, have been camouflaged with ivy and hidden behind unsympathetic additions. Their design for the Computational Neuroscience Laboratory (2009) is clad in timber siding in random widths to recall the cabins it replaced and is roofed in copper foil shingles. The Beckman Laboratory (1981) tries to conceal its size as well as age, through 'its dark brick exterior' and 'extra large windows that make it appear smaller when viewed from a great distance' (Watson, 1991: 315). Elizabeth Watson optimistically proposes that 'it could be mistaken for a grand waterview-endowed Long Island mansion design in classical turn-of-the-century-style' (Watson, 1991: 315). (This is not so, even its architects consider its bulk and siting a mistake). Centerbrook's second home for the Watsons is in the English Regency style, painted a peach color and featuring symmetry, chimneys and traditional double hung windows. Built in 1994, and pretentiously christened Oaks at Ballybung, Elizabeth Watson describes the house as being 'inspired by the classic farmhouses outside Venice designed in the late sixteenth century by the Italian architect and author Andrea Palladio' (Watson, 2008: 127).

The first major expansion of the infrastructure of the CSHL took place in 2009 with the opening of the 100,000 square foot Hillside Laboratories at a construction cost of USD\$100 million. Eighty percent of the capital came from private donors and philanthropic foundations whose gifts are commemorated in building names – the Donald Everett Axinn Laboratory, the Nancy and Frederick DeMatteis Laboratory, the David H. Koch Laboratory, the William and Marjorie Matheson Laboratory, the Leslie and Jean Quick Laboratory, the Wendt Family Laboratory. Even the complex's heat exhaust vent bears the name of donors and is pretentiously called the Laurie and Leo Guthua-rt Discovery Tower.

Housing about one-third of its research personnel, the new laboratories are below ground and have no natural light or outlook. Approximately 200,000 cubic yards of earth was removed and 11 acres of forest cleared, to enable the laboratories to be buried (CSHL, 2009). As the drawings below (Figure 3a and 3b) show,

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It would be inaccurate to identify the Hillside Campus as a postmodern building.

the subterranean laboratory floor is a single interconnected structure, but the connections are awkward and circulation routes labyrinthine. The fragmented plan required no fewer than five elevators and six stairwells to address fire and accessibility codes. The laboratories themselves are small and insular. As research teams grow and shrink, there is no ability to simply change the allocation of benchspace as there would be in a larger laboratory. Indeed, the compromised functionality of these laboratories underscores the rhetorical priorities of the CSHL’s architecture. Above ground the Hillside Laboratories emerges as six discrete buildings. The CSHL proposes that these ‘complement rather than overpower the CSHL’s smaller, historic buildings’, but they, are in fact considerably larger and their construction – a brick base with concrete and concrete block superstructure – yields none of the finer detailing of early twentieth-century timber methods (CSHL, 2009). Clustered around a multi-level courtyard (Figure 3a) each is painted a different color – sienna, sage, olive, umber, yellow ochre. The roofs are steeply pitched and the gables at each end are punctuated by vertical ‘chimneys’ that conceal the necessary vents and risers of the hidden laboratories (Figure 3b). Randal Jones, the campus manager, in an email to this author explains the design ‘was intended to recall an alpine village. This is enhanced by the severely sloping site, the use of artificial pavers in the courtyard spaces, and a towering central exhaust stack mimicking a church bell tower common to village squares.’ In a series of negations, Bill Grover of Centerbrook suggests ‘[w]e didn’t want to build something that would make it no longer look like a small whaling village’ (Tarquinio, 2009). His colleague, Jim Childress, believes the buildings of CSHL ‘do not look new or even like laboratories’ (Childress, 2015). He adds, ‘it’s not obvious, even from close up, what goes on at Cold Spring Harbor Laboratory’ (Childress, 2015). In 2009, a reviewer for the *New York Times* suggested ‘[a]n architectural sleight of hand has disguised the new labs as a miniature Bavarian hilltop village’ (Tarquinio, 2009).

It would be inaccurate to identify the Hillside Campus as a postmodern building. The retrogressive architecture that we see at CSHL commenced before and has persisted long after the revival of historical styles

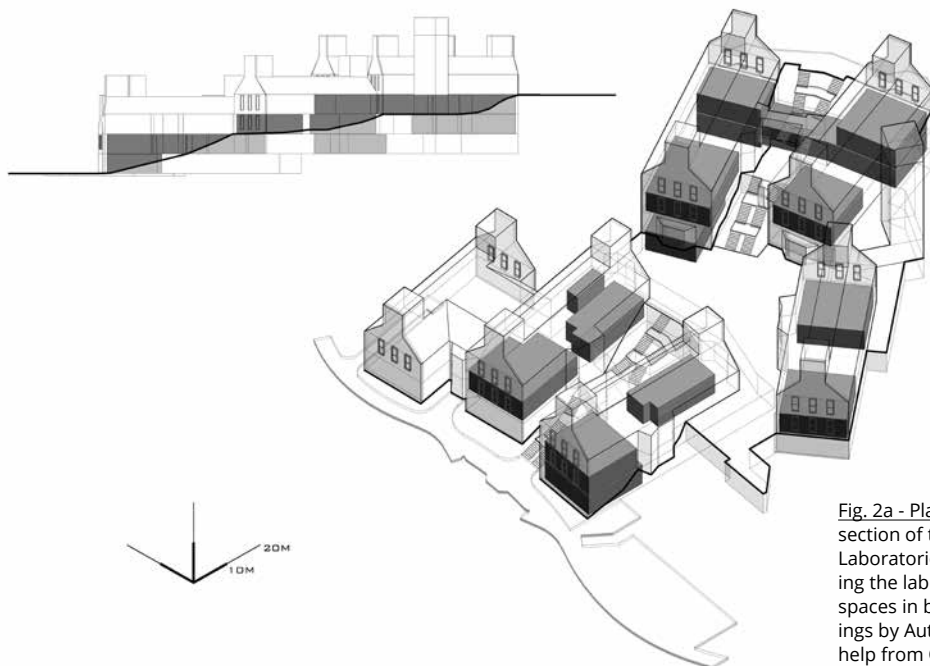


Fig. 2a - Plan and section of the Hillside Laboratories, showing the laboratories spaces in blue. Drawings by Author with help from Quoc Anh Ho, Aiden Morris and Carlotta Marijuan-Rodriguez.

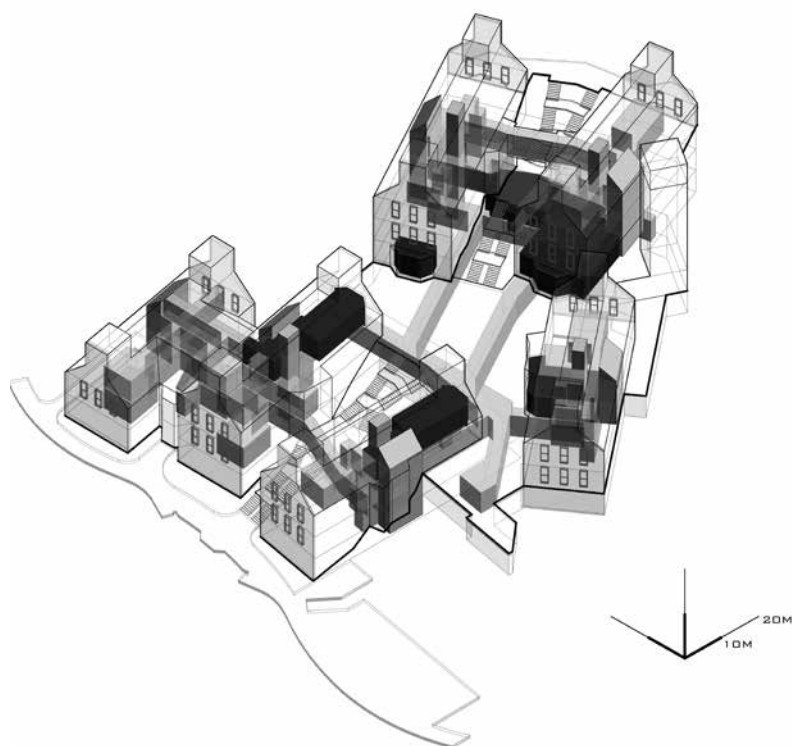


Fig. 2b - Circulation diagram of the Hillside Laboratories. Drawings by Author with help from Quoc Anh Ho, Aiden Morris and Carlotta Marijuan-Rodriguez.



Figs. 3a and 3b - The Hillside Campus at the CSHL from above and below.
Photographs by S. Kaji-O'Grady.



in the 1980s. Between the 1890s and 1940s, the elite families of the region built over one thousand mansions in neo-Georgian, English Tudor, Gothic, Roman and French chateau styles (and combinations thereof) in emulation of the country estates of the European aristocracy. Some of these houses were transplanted to the campus after Watson's arrival, where they now find themselves bordering invented 'historic' streets. Today's conservative elites in the region – the milieu of CSHL's donors – live in original or reproduction versions of these early mansions. They employ architects such as Robert Stern, Shope Reno Wharton, and Haynes-Roberts, to deliver houses that look traditional, but incorporate contemporary technologies for construction, heating and cooling, security, and communications. Centerbrook provide a similar service to the CSHL.

With the architects' cooperation and expertise, the Watsons have overseen the development of the campus towards the creation of a pseudo-historic architectural ensemble that is idiosyncratic in the field of biosciences research. It is also at odds with the CSHL's forward-looking research and young work force – the ratio of senior to junior members of scientific staff is roughly 2 to 3 compared with 7 to 3 at the Salk Institute (CSHL, 2017). Despite housing up-to-date technologies and boasting a Fellows program to support young early career scientists, the CSHL reproduces a version of the residential villages around it. It is 'like a New England town square' (Childress, 2010). Through the architecture of the CSHL a philanthropic base is constructed and reified, a scientific agenda forged and favored, and the excesses of the capitalist economy modulated in maintenance of the status quo. Here scientists and philanthropists each find succor.

J. Craig Venter and the West Coast scene

James Watson collects art, plays tennis, drives his Jaguar XJL around the North Shore's country roads, and dons black tie for fund-raising galas and dinners with New York's elite financiers and philanthropists. His wife, Elizabeth, a graduate from the private liberal arts women's college, Radcliffe, hosts dinners and receptions in the house at CSHL and sits on numerous boards for museums, botanic gardens, and historic preservation. (Watson, 2008: 208). Craig Venter's

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leisure pursuits, on the other hand, are of a different shade and the popular press has eagerly followed the exploits of this former surfer, navy veteran, and single parent. As told by (or to) *The New York Times*, these include 'riding his German motorcycle through the California mountains, cutting the inside corners so close that his kneepads skim the pavement' and 'snorkeling naked in the Sargasso Sea surrounded by Portuguese men-of-war' (Hylton, 2012). *The Wall Street Journal* reports that in addition to owning a 'gas-guzzling' Range Rover, Aston Martin, and having a penchant for rare vintage motorcycles, Venter enjoys 'doing large donuts' in his '45-foot jet boat' (Lin, 2014). Venter's third and current wife is his publicist Heather Kowalski, which may, in part, explain why he is accused of 'science by press release' (Singhal, 2013). Science historian Steven Shapin describes Venter as 'aggressive, arrogant and ruthlessly competitive' as well as 'belligerent, innovative, ambitious and entrepreneurial' (Shapin, 2015).

Where Watson's affiliation with CSHL has been steady, Venter's business activities and collaborations are dynamic and complex. One of Venter's trailblazing contributions to science has been the design of a business model that twins non-profit basic research organizations with for-profit companies. The model aims at a swift transition of scientific discoveries into marketable products for companies, which in turn make tax-deductible gifts to their not-for-profit partners to fuel further research. The J. Craig Venter Science Foundation was launched in April 2002, merging three of the five not-for-profit research companies Venter had previously established. He personally gave the foundation a USD100-million-plus endowment that he had amassed from a previous venture, Celera – a curious case of being both philanthropist and beneficiary. In 2005, Venter launched a for-profit company called Synthetic Genomics which funds 8% of the JCVI's roughly 300 researchers and has rights to the intellectual property generated by their research activities. Venter owns 15%.

Venter also sought venture capital for the research being undertaken by Synthetic Genomics and its subsidiaries, which now includes a fourth one formed in 2014 called Human Longevity Inc. (HLI). Venture capital is not philanthropy, for investors seek an

agreement with the companies they invest in to share equity and future profits. Yet it bears some of the same social characteristics and tax benefits. Investing in research where there is very little chance of making a profit in the short to middle term is a way for corporation to redirect excess money while appearing to make a commitment to discovery. The US\$300 million that Exxon gave Synthetic Genomics in 2009 to develop algal biofuels is a good example of this. Their gift was not taxed since there has been no profits or capital gains. Commentary since has emphasized the failure of the venture to yield viable algal biofuels and questioned the sanity of and motivations for Exxon's ongoing commitment. Yet more is at stake for the petroleum giant than finding alternative fuels, the apparent end goal. Indeed, Exxon has its own research subsidiary, Exxon Enterprises, and in parallel invested the same amount on in-house research into algal biofuels. What the company sought from its alliance with Venter, was not so much a recipe for biofuels, as his reputation for innovation, for intellectual originality, and daring-do. They aimed at what in marketing is called 'brand alliance'. They also sought green credentials. The same applies for Monsanto and Novartis, to name just two of the larger equity investors in Synthetic Genomics' subsidiaries. Architecture helped in this regard.

The Architecture of the JCVI

JCVI is the respectable and visible center of this complex network of business and research activities. Their three-story headquarters of the JCVI in La Jolla, California opened in 2013 and was designed by Zimmer Gunsul Frasca (ZGF) at a construction cost of USD forty-eight million (Figure 4). It comprises a laboratory and administration facility of 45,000 square feet (4180 square metres) on a 1.75 acre (0.7 hectare) scenic coastal site at the Scripps Upper Mesa. The land was gifted for a peppercorn lease by Venter's alma mater, the University of California, San Diego. The architectural expression of Venter's new laboratory speaks volumes about the paradoxical agenda of Venter's quest to save the world through synthetic genomics. Venter's ambitions for the building were twofold: to emulate the Salk Institute of Biological Studies which lies three kilometers to the north; and

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Fig. 4 - The JCVI building in La Jolla, California from the South. Photograph by S. Kaji-O'Grady.

to inspire other laboratories to reduce their environmental impact. Accordingly, the design by ZGF, borrows the raw teak and exposed concrete of the Salk Institute, and has a central courtyard open at one end to views of the sea. But where Louis Kahn's design for the Salk foregrounded the offices of the lead scientists, it did so in a way that suggested their democratic engagement as a collective, with each office of equal-size and prominence. Venter's office at the JCVI, on the other hand, is singularly large and, at the prow of the administration and facilities wing. It is the only office with ocean views. The JCVI's courtyard is long and narrow, its flanking wings asymmetrical. Overhead a roof of photovoltaic panels obscures the sky above the courtyard while Venter's office obscures views to the sea. The building and its grounds fail to cohere into any single architectural iconic image, but the centrality of Venter to the organization is unmissable. He is to the JCVI what a king is to a palace.

Venter and his architects aimed to achieve a net-zero energy laboratory building through orientation, sunshades, high-performance glazing, operable windows, and a naturally ventilated car park with bicycle storage. Unused equipment is automatically shut-off and there are variable brightness settings



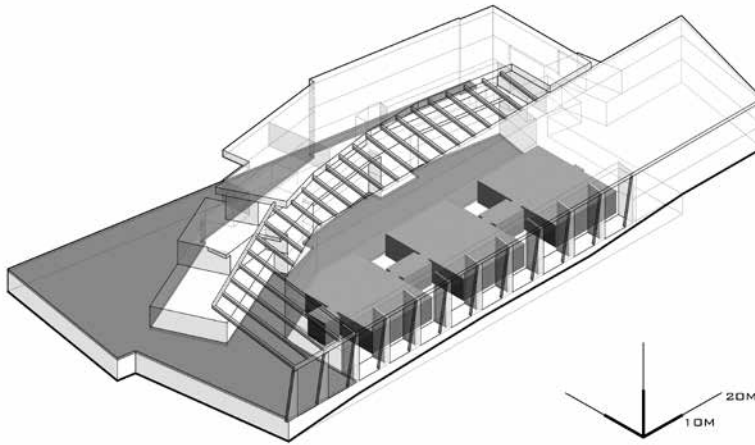


Fig. 5a - Diagram of the JCVI showing the laboratories in blue. Drawing by Author with help from Quoc Anh Ho, Aiden Morris and Carlotta Marijuan-Rodriguez.

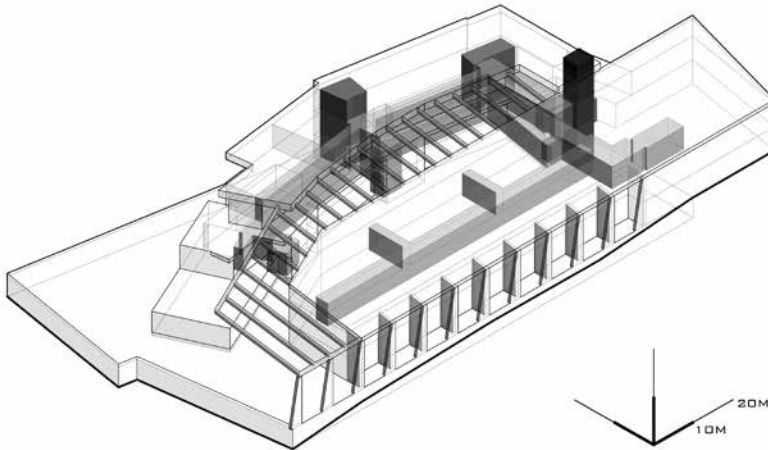


Fig. 5b - Diagram of the JCVI showing the circulation routes bifurcating from the entry to the laboratories in one wing, and Venter's office at the end of the other wing. Drawing by Author with help from Quoc Anh Ho, Aiden Morris and Carlotta Marijuan-Rodriguez.

for artificial lighting. Additionally, the building has chilled beam air-cooling, recycled water for non-potable water functions, low water landscaping, rainwater collection, and high-efficiency plumbing fixtures. Materials with low-embodied energy were specified – high-strength concrete with a maximum amount of recycled content, bamboo flooring and Spanish cedar timber siding. The most visible sustainable feature of the laboratory is the mass of integrated photovoltaic panels – two arrays comprising 26124 SF of photovoltaic surface – that the architects predict will exceed the building demand. Given the huge power demands of laboratories, this is an impressive feat. To achieve sufficient area, the array covers the roofs of both wings and the courtyard between them. A planned

Without diminishing the fuel savings made at the JCVI or its role as a model, Venter arguably needs solar panels symbolically more than needs to offset his fuel costs.

bio-reactor succumbed to budget revisions in the design documentation phase. For Venter, '[t]he Institute's unique design melds the environmental philosophies of our genomics research with [...] sustainability goals' (ZGF Architects LLP, 2015: 7). In fact, Venter has elsewhere described the mechanical approach to sustainability as limited, explaining that he 'wanted to do more than just using less oil and gas or installing a solar panel' (Venter, 2007: 334). Ironically, he has 1488 of them at the JCVI and more at home. By contrast, Venter's for-profit organizations reside in air-conditioned leased accommodation, the architecture of which is oblivious to even the simplest fuel-reduction strategy. Without diminishing the fuel savings made at the JCVI or its role as a model, Venter arguably needs solar panels symbolically more than needs to offset his fuel costs. His research has a rhetorical dependency on recognition of human-caused environmental degradation. Venter's research program into synthetic genomics requires problems that synthetic genomics specifically will solve. Thus, Venter declares that 'modern life, in short, is unsustainable', and so as to propose 'environmental genomics' is the answer (Venter, 2007: 334). Self-replicating synthetic genomics and microbes have many potential uses – only one of which is the engineering or bioremediation of the earth's 'sick atmosphere' (Venter, 2007: 348). In short, the design of the JCVI reinforces climate change as a problem to be solved by advances in science, engineering and technology, rather than, say, behavior change, population reduction, or social revolution. Companies like Exxon get green credentials for giving money to Venter to research bio fuels derived from algae, Venter gets green credentials from his building. It is worth noting that the Hillside Campus Laboratories at CSHL likewise incorporates energy-efficiency and sustainability measures, such as a highly insulated building envelope, but these are invisible.

Venter and his Backers

So, how does the representation of environmental commitment work in tandem with the building's emphatic staging of Venter as its Chairman and chief scientist, and to whom is the building addressed? If we return to the companies and individuals that

support the JCVI's research and that of its commercial arms, it becomes clear that the building, right down to the vintage motorcycles that decorate Venter's office, (Figure 6a) speaks to the predilections of those who see a kindred spirit in Venter's adventurous approach to life, science, and entrepreneurship. Take, for example, his cofounders in Human Longevity Inc, Dr. Robert Hariri and Dr. Peter Diamandis. Like Venter, these are high-achieving entrepreneurs who combine scientific knowledge and business acumen. Hariri, is a celebrated surgeon and biomedical scientist, and also a member of the board of trustees of the JCVI. Hariri's company, Lifebank USA, a placental and cord blood banking business, was acquired by HLI in January, 2016. Diamandis has degrees in Molecular Genetics and Aerospace Engineering from MIT, as well as an MD from Harvard Medical School. Founder of the X Prize Foundation, known for its USD\$10 million Ansari X Prize for private spaceflight, Diamandis is also co-founder of the Singularity University, and a company called Planetary Resources that hopes to mine asteroids for precious metals.

People like Hariri and Diamandis take risks. Larger corporate investors, such as Exxon Mobil, BP, Novartis, and Monsanto, can easily afford to take calculated (tax avoiding) risks. Venter's goal 'is to replace the entire petrochemical industry' (Pollack, 2010), but what they heed is his claim that '[w]hoever produces abundant biofuels could end up making more than just big bucks – they will make history... The companies, the

People like Hariri and Diamandis take risks. Larger corporate investors, such as Exxon Mobil, BP, Novartis, and Monsanto, can easily afford to take calculated (tax avoiding) risks.



Fig. 6a. One of Venter's Vintage motorcycles in his office. Photograph by S. Kaji-O'Grady.

Fig. 6b - Walls of certificates and medals in Venter's office. Photograph by S. Kaji-O'Grady.



countries, that succeed in this will be the economic winners of the next age to the same extent that the oil-rich nations are today' (Wenner, 2009). The CEOs and agents of these companies are reassured by the scale and location of the JCVI and by Venter's large office with its walls covered with the medals and certificates that declare his standing in the scientific community (Figure 6b). The universities, government organizations, investors and other private corporations that circle around the star presence of Venter and his team are a complex constellation critical to the formation and operation of the new JCVI building. Equally, the building provides the critical gravitational pull that keeps them circling. Its blend of technical innovation, moral high ground, and homage to the Salk, speaks to Venter's aphorism that, '[i]f the science works, the business works, and vice versa' (Pollack, 2010).

Conclusion

This paper opened with the argument – made by others – that the scientific research landscape is distorted by its increasing reliance on private funding. It is equally arguable that the architecture of science is similarly being shaped by this context. If we ask whether a partnership like that of Jonas Salk and Louis Kahn could play out in La Jolla today, the answer would have to be that it is unlikely. Craig Venter, like

Salk, had the rare opportunity of commissioning a purpose built institutional setting in his name, while still alive. An obvious choice of architect, someone with similar background and interests, would have been Thom Mayne – another Californian born in the mid-1940s who sought out the unconventional. A partnership with Mayne's Morphosis is not what happened though for Venter needs his corporate donors. The architecture needed to lend gravitas to the scientist, to make it clear that he'd grown up and could, would, save the world.

Centrebroom and Zimmer Gunsul Frasca are competent, client-focused, commercial practices untroubled by the formal ambitions and theoretical rhetoric that has seen architects such as Fosters, Tadao Ando, Zaha Hadid, Chipperfield, SANAA – each of whom have designed laboratory buildings in the last decade – come to prominence. Which is not to say that the architecture of the JCVI and the CSHL Hillside campus is indifferent, accidental, or without interest. These buildings house exceptional researchers and their laboratories in similar scientific fields in the same nation, but the architecture of each has its roots in forces outside of the expression of the laboratory function or the scientific program. The CSHL pursues a retro-village aesthetic while the JCVI opts for a Kahn-ian inflected display of sustainable technologies. Their incommensurate architectural clothing is both fascinating and revealing. This paper has sought to understand their divergence. It has argued that the differences between them arise because each is exceptionally attuned to the taste cultures and concerns of the people on whom the researchers depend to fund their endeavours. It's a sensitivity that is repeated across the sector, wherever there is need to target the interests and preferences of old or new money, philanthropy or speculative investors.

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N. Foster

The Apple Case.

Architecture, Global Market, and Information Technology in the Digital Age

Lina Malfona

Abstract

Focusing on the relationship among architectural form, global market, and digital technologies, this essay investigates the controversial nature of the corporation, between real and virtual, local and global space. The writing contains two intersecting paths of reading. On the one hand, it focuses on the latest building of the Apple enterprise, which is analyzed through a formal as well as metaphorical comparison with some previous architectural experiences, including both the Stanford academic campus and the Royal Saltworks of Chaux. On the other hand, the paper focuses on the strategies used by Apple Computers in the construction of its competitive image, and passing through a reading of primary data, such as early experiences, products, commercials, and buildings, it analyzes the proper company's style, that we can define as "Apple Architecture".

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Apple is the pivotal example of a corporation serving a global marketplace, while challenging, in the form of its headquarters, notions of virtual and physical space, connection and separation, centralization and colonization.

What is the physical organization of a type of campus that arises as a new monument for a highly technological and competitive society?

The Digital Corporation

«In a society of control», Deleuze wrote, «the corporation has replaced the factory, and the corporation is a spirit, a gas» (Deleuze, 1992a: 4). This statement describes the immaterial nature of the notion of corporation, by depicting it as an entity in perpetual “metastability”, whereas in electronics, the condition of “metastability” identifies the skills of a digital electronics system to persist for an unlimited time in a state of precarious equilibrium. Of course, in the Deleuze’s statement we can find the echoes of the Fredric Jameson’s belief that the physical entity of the marketplace is going to disappear and to be replaced by its image, its brand (see Jameson, 1991). However, if a corporation is defined by its immaterial flows, it is also described by the territorial basis of its nodes, legible in the headquarters of the corporation itself (see Harwood, 2016: 218-243). Today, more than in the past, the network of intense online connection seems to have its fortified zones: IT campuses, research laboratories, and headquarters of the Internet giants appear as physical nodes for producing digital technologies and fostering global connectivity, but they also materialize as new strongholds of control and power. A new type of militarization makes these centers inaccessible and fortified garrisons, which paradoxically produces a spatial model that separates instead of connecting. Among the multinational technology companies, Apple is the pivotal example of a corporation serving a global marketplace, while challenging, in the form of its headquarters, notions of virtual and physical space, connection and separation, centralization and colonization.

The point is: what is the physical organization of a type of campus that arises as a new monument for a highly technological and competitive society? Is it a power station from which free thought could arise, or is it a control center where a new type of surveillance is developing?

Design and Commercial Strategy. Jobs Leadership

Apple is one of the few IT companies in the world that seems to trust in its own autonomy, instead of its place within a network, as a philosophy of labor, management and marketing, and it is also the only IT company that has been rewarded by this philosophy. In this

regard, it is relevant to consider the epic history of Apple Computers, started in 1976 when the inventors Steve Jobs and Steve Wozniak produced some circuit boards in a garage in the Silicon Valley, by analyzing primary data, such as early experiences, products, commercials, and buildings. Jobs was able to manipulate his venture, by fostering a myth around it, a myth that has to be examined in order to stress some key points. Jobs gave the first demonstration of the “Apple I” in a Homebrew Computer Club meeting at the Stanford Linear Accelerator Center Auditorium, where a number of engineers enjoyed sharing and showing off ideas. The earliest purchaser, a representative of the Byte Shop, the first retail computer store chain in the US, agreed to buy the product only as a fully assembled computer (see Lynzmayer, 1999: 1-5). From the early stage of Apple’s history, indeed, the idea of an autonomous, fully assembled, and complete machine was a key point for the company, which is still broadly recognized today for its very secure devices: fortified boxes, protected from viral attack.

Watching Jobs’s presentations of Apple products in the early 2000s, it is interesting to observe how frequently he used the word “architecture” when referring to the internal structure of his revolutionary products, located at the intersection of technology and design. While Apple has created an empire of autonomous and well-designed products, it has even extended its signature and its brand to its corporate buildings, which follow the corporate guidelines; in this way, the spaces, too, become Apple products. They seem to delineate a peculiar style – which we can name Apple Architecture – based on a self-conscious sense of design, minimalist geometric figures, and an apparent celebration of transparency, employed as an advertisement or a form of propaganda.

Under Steve Jobs’s leadership, a belief in the universal appeal of bare geometric forms and faith in software revolution, along with a strong entrepreneurial spirit, made the success of Apple Inc. The Jobs’s strategy was to design innovative and attractive products by simplifying and stripping down the Mac models. Every part of the process had to be carefully choreographed and designed, including the box, packaging, cables, and other accessories. In a conversation that took place in 1981, Jobs said that the Macintosh should be “like

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The revolution in which Steve Jobs believed, should have been started on college campuses, involving higher education processes in order to create a foundation for a new corporate culture.

a Porsche,” evoking a futurist hymn on the machine’s power (Price, 2008: 83-85).

On January 30th 1984, Steve Jobs attended the General Meeting of the Boston Computer Society to introduce the Macintosh computer. His bold and visionary speech started with a comparison between the achievements of Apple and of IBM, self-confidently focusing on Apple’s big accomplishments to date. He continued by presenting the company’s “1984” commercial, which introduced the Macintosh. Recalling the Orwellian scenario, a 1984-like super bureaucratic world, the commercial showed a multitude of slack-jawed drones, watching Big Brother on a huge video display, until a woman came from the back of the room and tossed a sledgehammer into the screen. The closing frames promised that the Macintosh would be the reason “why 1984 won’t be like 1984” (Price, 2008: 83-85). The famous commercial was one of the best expressions of Apple’s philosophy, fostering an idea of the company as a place for people with an anti-establishment cast of mind and a desire to change the world. A world which would be modified by the introduction of personal computer, created as a mean for personal liberation, the word “personal” meaning also individual. Another interesting slice of the Apple strategy, dealing with autonomy and individuality, can indeed be observed in the Apple spot “Think Different” (1997), directed by Ridley Scott for the Los Angeles office of advertising agency TBWA\Chiat\Day. The spot showed an overview of talented men who changed the history of humanity, like Picasso, Frank Lloyd Wright, Martin Luther King Jr., and Paul Rand. Following a now-familiar pattern of overturning, or revolutionizing previous concepts, Apple paid homage to IBM, by modifying the slogan and trademark “THINK,” first used by Thomas J. Watson in 1911 (online source).

The revolution in which Steve Jobs believed, should have been started on college campuses, involving higher education processes in order to create a foundation for a new corporate culture. Even when Jobs left Apple and founded the company NeXT, his particular interest in creating, if not a school, but a techno-entrepreneurial community was evident. Heading NeXT, and through his ritual retreats with employees on Pebble Beach in California, Jobs tried to

create a para-academic institution, where one could elaborate marketing, entrepreneurial and technological strategies. And even when in NeXT, Jobs' personal vision remained prominent: by meticulously perfecting products, he defended design as an integral part of the business plan, and not as a mere addition. For this reason, he called Paul Rand, designer of the IBM logo, in order to give the company graphic appeal. In fact, an interesting slice of the Apple strategy can be observed in Apple graphics and advertisements, like Apple's first logo, designed by Ron Wayne, one of the three founders of Apple. While it was later substituted by the final logo, it shows the earliest sources of inspiration. It was an ink drawing, depicting Isaac Newton leaning against an apple tree and reading a William Wordsworth poem. Running around the border, the quotation "Newton... a mind forever voyaging through strange seas of thought... Alone". The words "mind", "strange" and "alone" anticipate the company line of thinking: its desire to foster talented minds who think unconventionally and walk alone, "because the people who are crazy enough to think they can change the world, are the ones who do" (Jobs, 1997). We can find the term "alone" in one of the most elegant Apple spot, "Alone Again" (1983), a video directed by Ridley Scott for TBWA\Chiat\Day, presenting the computer "Lisa" as incompatible with all established standards.

Figures of Apple Architecture

It seems to be contrarian that in the era of global connection, the image of a company leader in the production of Information Technology, as in the case of Apple, is that of a self-contained figure, the circle. However, the circle, which alludes to security, protection, and eventually, autonomy, is operative across all the Apple products, processor or buildings. When the spinning wheel is closed, the download is complete and the software is ready to be applied; the logo of the Apple device's settings is a toothed gear wheel, and in order to gain access to the screen one must press the central button, a circle. The circle, which alludes to security, protection, and eventually, autonomy is operative across Apple products, processor or buildings. When the spinning wheel is closed, the download is complete and the software is ready to be applied. The

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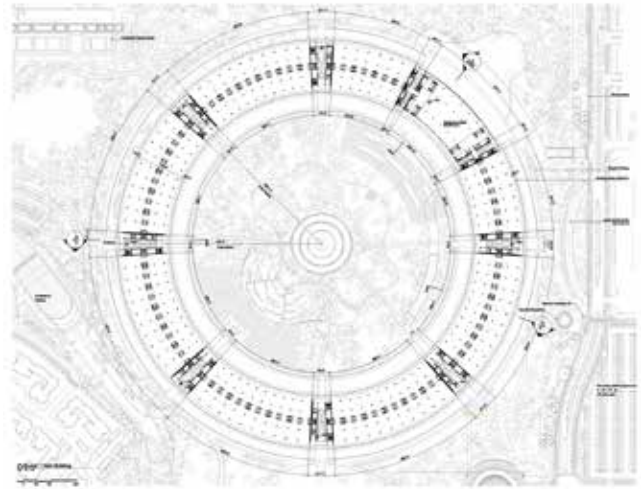


Fig. 1 - Simon Martin-Vegue Winkelstein Moris, Apple San José Headquarters, 1990 (published in Edie Lee Cohen, *Apple Computer*, "Interior Design", vol. 63, no. 4, February 1990); Foster & Partners, Apple Campus 2, Cupertino, 2013- (online source).

The Apple Company embodies the idea of a new pragmatism, based on organizational efficiency in the struggle against competitors, control of information circulating on the net, and trading of this data through communication infrastructures.

logo of the Apple device's settings is a toothed gear wheel, and in order to gain access to the screen one must press the central button, a circle. The circle is also the image of the plan for the Apple campus in Cupertino, California, the old one, known as "Infinite Loop," designed by Hellmuth, Obata & Kassabaum in 1993, as well as the new one, Apple Park, designed by Foster + Partners. If the metaphor of the arena recalls the unrestricted global arena which represents the exchange of information through digital infrastructures, this figure also has certain political and economic implications, which we are going to highlight through a formal analysis. If the geometry of the circle represents a universalistic idea of global connection, it also represents enclosure and self-sufficient centralization. In fact, it is possible to discuss widely the rapport between the myth of power and architecture, and why circle and enclosed forms has been used in most of institutional architecture, as the Pentagon and the GCHQ. However, the Apple Company embodies the idea of a new pragmatism, based on organizational efficiency in the struggle against competitors, control of information circulating on the net, and trading of this data through communication infrastructures.

On June 7th, 2011, during a City Council Meeting, Apple founder Steve Jobs personally showed the municipality of Cupertino the design for the Apple Park, intended to host 20,000 people and designed as a sort of starship, landed in Silicon Valley. The build-

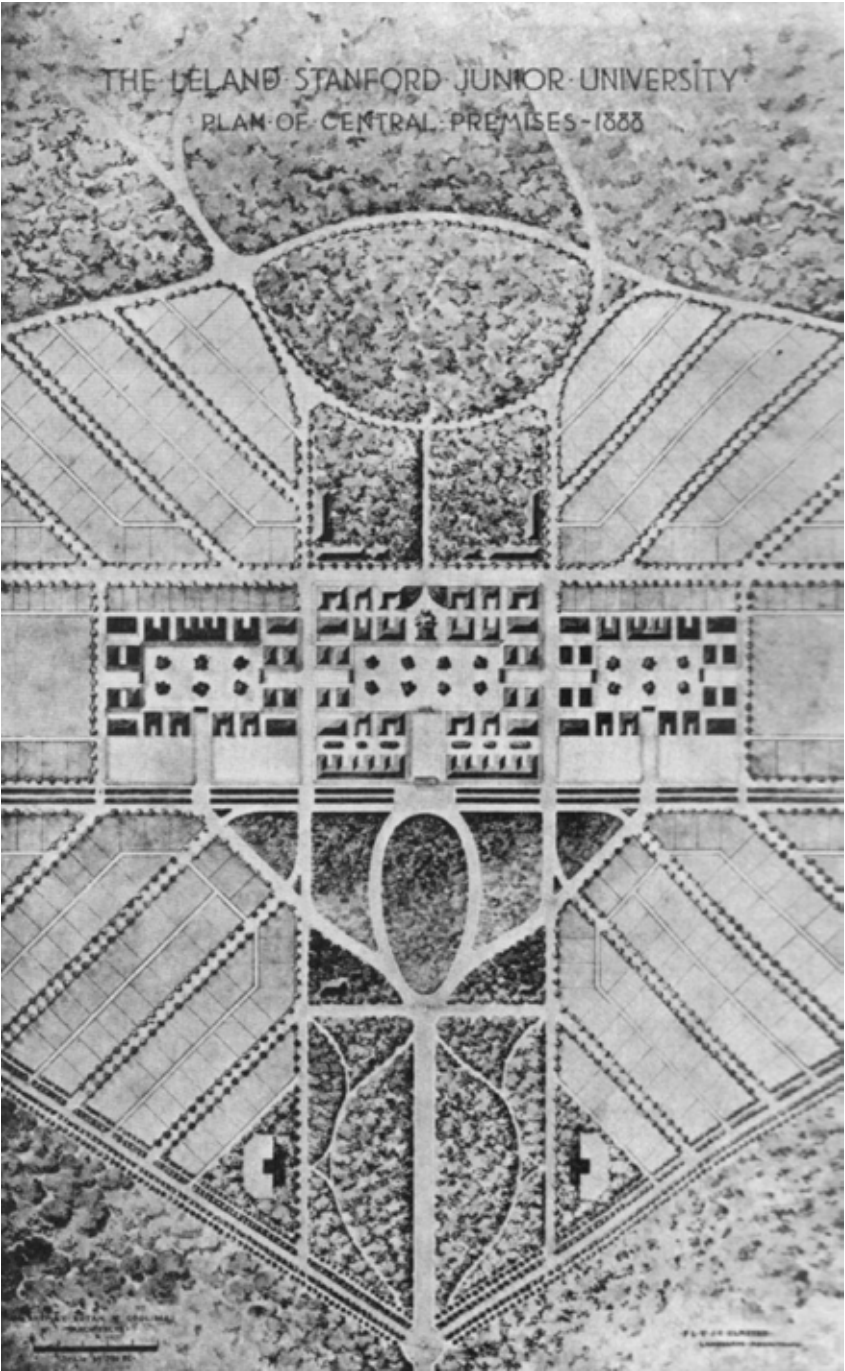
ing looks like a futurist spaceship, a hyper-innovative machine meant to provoke destabilizing effects on its surroundings, according to Jobs' words. This last aspect of Apple Architecture is intriguing in its manifestation of the building as a kind of heterotopic space. Michel Foucault indeed defines heterotopia as a necessary, perhaps even conceptual space, full of creative energy, used to enhance reality (see Foucault, 1984: 49).

Norman Foster, who designed the Apple Park with early input from Steve Jobs, describes it as a kind of hi-tech ring-shaped greenhouse, encompassing an *hortus conclusus* (see McGuigan, 2014: 72-74; Foster + Partners, 2014: 28-31). According to Foster, Jobs' first point of reference was Stanford University, designed by Frederick Law Olmsted around 1888. Stanford was both an architectural and urban model: it was conceived according to the tradition of the American campus as a utopian community and it was inspired by the monastic precinct's integration of labor and life. The first design sketch showed a modest circular arrangement of buildings set in the hills to the south of the present Quad (1886), but the last proposal was a more formal composition, offering an ambitious design, organized around two orthogonal axes (1888) (see Joncas, Neuman, Turner, 1999: 2-12). What is really remarkable in the plan design is the link between the Inner Quad and the Outer Quad: a double ring of discrete buildings, connected by a complex system of arcades. From above, this interconnection of spaces makes the central Quad akin to a castle, with its bulky stone walls (the campus' pavilions) and its routes (the courtyards framed by pavilions). In some ways, the project became urban architecture, and this could be considered both the most important feature of the original Stanford architecture and the one most akin to Jobs' vision: a circle as an experience of totality, like the interlinked quadrangles of the Stanford campus.

After a first idea to forest only the foothills south of the university, Leland Stanford expressed a more ambitious concept of a university and universal forest, an *arboretum* organized around different specimens of plants, encompassing the campus. As we will see, this proposal was overturned in the Foster-Jobs' idea of an inward-looking garden, at the center of

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Fig. 2 - Frederick Law Olmsted, Stanford University, 1888 (published in Charles E. Beveridge, Lauren Meier (eds.), *Frederick Law Olmsted: plans and views of public parks*, Baltimore, John Hopkins, 2015).



the project for the Apple Park in Cupertino. Here, the forest that encircles architecture has been replaced by an *hortus conclusus*, in which a number of local plant species could be transplanted and protected in an *asylum*: a kind of new *abbey* of the digital age. Jobs imagined the campus as a Garden of Eden and, at the same time, as a theatre: a pure form, separated from its surrounding urban context, to which access is restricted. This aspect could allow us to include the building among the Foucauldian heterotopias: it is a profane version of a holy space, continuous as a ring but disconnected from context, in a spiritual detachment, as a condition for intellectual, scientific and artistic autonomy. In the Third Principle of his essay “Des Espaces Autres”, Foucault described the garden as “the smallest parcel of the world and then the totality of the world”, (a place where) “all the vegetation was supposed to come together, in a sort of microcosm” (Foucault, 1984: 48).

The figure of the circle, as an architectural typology of control, fits particular places of worship and labor because it expresses the necessity of protecting the specific activity carried out inside from the outside. However, the circle contains as successfully as it incisively excludes. In this regard, the reference to Stanford University is not merely instrumental, in that it mirrors the tradition of the American campus as a city within (or outside) the city, like the University of Virginia in Charlottesville, designed by Thomas Jefferson in 1817. But if the campus is a kind of miniaturized city, it is also in large part autonomous from the city itself, analogously to the new campus, the Apple Park. Evidently, the campus model cannot be perceived as a city’s fragment, inasmuch as it constitutes an alternative city: something introverted, exclusive and recognizable. Upon closer inspection, Silicon Valley can be considered a peculiar collage city, developed by following the Stanford University model. Along with other corporate campuses in the Valley, Apple Park does nothing but duplicate Olmstead’s model, and, in a way, reinterpret the internal logic of the Quad city. If the “Stanford effect” multiplied the urban model of the city within (or outside) the city in various topologies of corporate clusters and specialized urban sectors, Apple Park can show the common features of corporate architecture in the Silicon Valley.

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In terms of urban design, Apple Park does not contain any principle of reproducibility, nor does it adhere to an urban strategy: it refuses to foster connection with its neighbors, but it does not create separation in an urban sense. In the end, the project is made of a series of buildings among which no links could be perceived. Since the design is not repeatable, it marks the city as an anonymous piece of it, albeit a beautiful one.

We can trace some features of the Apple Campus to some projects designed by Eero Saarinen, as the Bell Telephone Laboratories at Holmdel (New Jersey, 1962). The project was derived by a kind of turning-in-side-out of the Bell Laboratories in Murray Hill, and it focused on the concept of inward-looking space. The workspace in the Bell Laboratories was entirely artificially conditioned and the corridors, lining the external curtain-wall, encompassed laboratories and offices, as in the case of the Apple Park. The most engaging point of comparison is found in the earliest sketches made by Saarinen, which can be viewed as a set of topological studies intended to investigate the relationship between inside and outside, contiguity and separation, along with providing a range of possible models for the Bell facilities. Like the final solution, these preliminary studies were highly formalistic and symmetrical, but whereas the final solution was arranged around a cruciform atrium, these early models were distributed around an open central space (see Martin, 2003: 193-97). Although, ultimately, the actual construction of Bell Labs deviated from these initial sketches, the early proposal for a green atrium, equipped with tropical plants, is mirrored years later in the plan for Apple's *hortus conclusus*.

Another model, or, more precisely, a form of urban architecture, wraps its corporate architecture around a courtyard and stirred the office floor typology by creating an unprecedented indoor garden. Namely, Kevin Roche, John Dinkeloo and Associates' Ford Foundation Headquarters in New York (1963-68) was shaped around an artificial and automatically controlled greenhouse. One of the aspects of this building is the business deal that was struck among the different actors involved in the process of creating the foundation. The goal, as Roche put it, was to articulate "a sense of the individual identifying with the aims and intentions of the group". [...] Others, too,



Fig. 3 - Eero Saarinen, Bell Telephone Laboratories at Holmdel, New Jersey, 1962 (online source).

noted that this suspension of the city of the seasons, of office workers within a controlled, internalized environment translated into a sense of control at the global scale. [...] Just as the environmental control mechanisms produced at ones a sense of security and simultaneously a certain unease, the building's spatial topology, switching back and forth between continuity and disjunction, here and there, resonated uncannily with the foundation's postwar mandate of expanding US interests within a global arena (Scott, 2016: 52). What emerges from this analysis is the scaleless control of the Ford Foundation Building, which could be seen as a media vehicle showing the image of a global capitalist system, as a trade-off between workers' identities and the corporation's cooptation. This last

Fig. 4 - Kevin Roche,
John Dinkeloo
and Associates,
Ford Foundation
Headquarters, New
York, 1963-68 (online
source).



idea highlights an extraordinary similarity between this building and the Apple Park in Cupertino, between deterritorialization and reterritorialization. In order to explain these two concepts, we may refer to the position of Kenneth Frampton, who pointed out the “underlying sense of *insecurity*” released from the exclusive Ford Foundation Building, “a house of Ivy League values and good intentions, dedicated to the dispensation of private profit for the public good, hermetically scaled in an unreal world” (Frampton, 1968: 311). Tellingly, the Apple hyper-tech ring-shaped greenhouse shows the same characteristics: it appears to be hermetical, scaleless and utopian. “Like his mentor Buckminster Fuller, Norman Foster thinks of Earth as a spaceship that travels through space,” (Fernández-Galiano, 2013: 5) and perhaps this is why he conceived the Apple spaceship as a circular and iterative atopic building, with radial blocks for facilities, with the restaurant as the one place that does not fit into the scheme. Apple Park is comparable with another building designed by Norman Foster as part of Stanford University: the James H. Clark Center for Biological Sciences. Embodying the collaborative spirit of interdisciplinary research, the Clark Center shows the same idea

Tellingly, the Apple hyper-tech ring-shaped greenhouse shows the same characteristics: it appears to be hermetical, scaleless and utopian.

Fig. 5 - Foster & Partners, James H. Clark Center for Biological Sciences, 2003 (photo by Lina Malfona).



We can observe the metaphorical as well as physical presence of the theater in the history of the Apple Inc., in relationship with Steve Jobs' communicative skills.

Commodity architecture prefers to borrow typologies, rather than erect new ones.

of a central void, onto which all of the building's windows overlook. Moreover, in the center of its open circular court, it houses two theaters where scientists can meet, share, and show their projects. The first of the two theaters is marked by a circle drawn on the ground while the second one, as in the Apple Park's theater, is a meeting room underneath it.

We can observe the metaphorical as well as physical presence of the theater in the history of the Apple Inc., in relationship with Steve Jobs' communicative skills. The IT company arose with the presentation of the "Apple I" model in one of the Homebrew Computer Club meetings (1975) and even today, each year the new products are announced during the meeting Macworld Expo, the pinnacle of a product development cycle. When Steve Jobs would take the stage, he would be enthusiastically greeted by an adoring crowd, and considering the climax of his product demonstrations, he became a showman over time: in his keynote presentations, he used a methodical approach, starting by summarizing the financial state of Apple, underlining some milestones, and then disclosing the news (see O'Grady, 2009: 143-145).

Beyond performance, Apple Park in Cupertino shows the centrality of theatrical space. The building hosting the Corporate Auditorium is designed as an anti-pole with respect to the architectural and urban configuration of the big circle: it is a cylinder, emerging from the ground floor as a glass showcase offering a miniaturized duplicate of the large central building. What is visible from the outside is only a small part of the whole theater, which is hidden underground: the glass showcase indeed is only a threshold. When observing its design, the viewer may experience some form of *déjà vu*. In fact, commodity architecture prefers to borrow typologies, rather than erect new ones. Consider the case of the Apple Store design, and, in particular, the Fifth Avenue Apple Store in New York, designed by Bohlin Cywinski Jackson in 2006, which is indebted to the building concept of the Neue Nationalgalerie, designed by Mies Van Der Rohe (see Bohlin Cywinski Jackson, 2010: 261-272). The concept is relaunched in an obviously simplified version that plays with both control and exhibition. Upon closer inspection, the Apple auditorium in the Apple Park is modeled on the Neue Nationalgalerie cross section as

well, with a basement where the spectacle happens and a preamble on the ground floor; it acts as a preparatory glass vestibule, where visitors can be purified before entering the Apple experience.

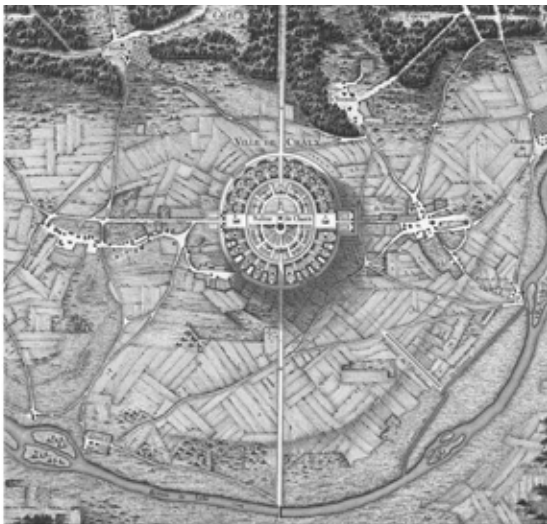
From Panopticism to Colonization

The new Apple campus neglects the territory on which it seems to have temporarily landed, as a spaceship, despite its deep foundations. Analogously, the plans for the Royal Saltworks of Chaux by Claude Nicolas Ledoux (1773-75) was also depicted as a spaceship, fallen off the city. The provocative comparison with this project will highline some of the characters and the topics, which Apple Architecture is based on. Ledoux usually put his designs in abrupt contact with the landscape: the cubes and spheres which featured in his *Architecture* are indeed artificial objects, their artificiality referring to a purified expression of nature. However, in Ledoux's lexicon, architecture dominated and surveyed the countryside, in keeping with the model of the belvedere, whereas the Apple Park is a blind element of surveillance.

Urban design is not the unique point of contact between Ledoux's project and Apple's product. An abstract principle of autonomy could be seen as a *trait d'union* between the two, and this refers not only to the unity of design but also to the type of labor carried out in these spaces. In his essay on *Revolutionary Design*, Antoine Picon stated that Ledoux proposed the

The new Apple campus neglects the territory on which it seems to have temporarily landed, as a spaceship, despite its deep foundations.

Fig. 6 - Claude Nicolas Ledoux, Royal Saltworks of Chaux, 1773-75; Foster & Partners, Apple Park, Cupertino, 2013.



If the ellipse (or rather the circle) is a form of surveillance, it could also be considered the form of the social contract.

The prototypes of residences and workshops located in the forest, at the intersection of some pedestrian paths, designed by Ledoux appear to share similarities with the idea of colonization that Apple carries out through its stores.

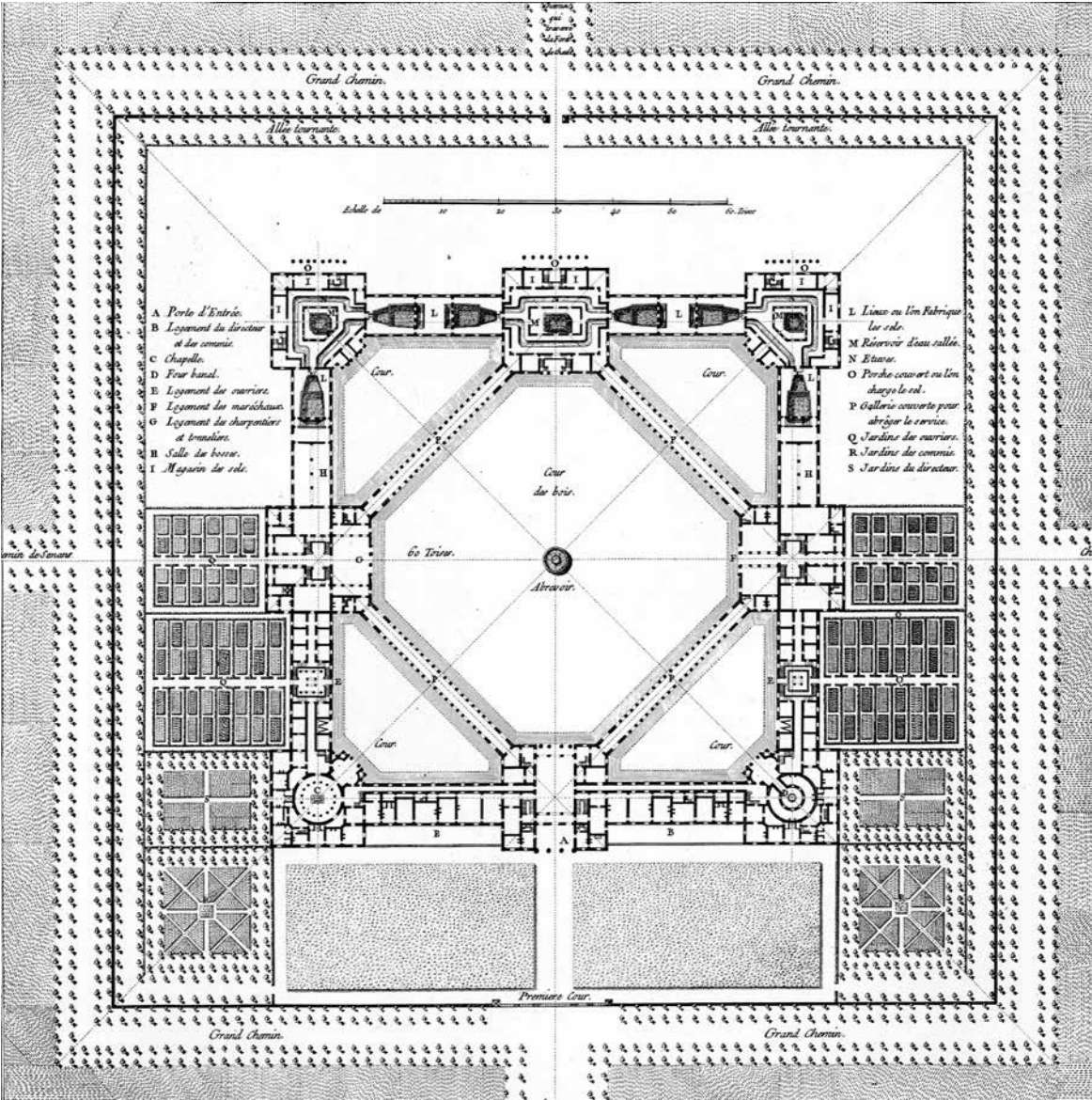
rationalization of production by means of a rigorous spatialization, and that “the idea of surveillance, which was facilitated by the elliptical emphasis, played a crucial role, the gaze of the director being directed in turn at the various stages of the production” (Picon, 1992: 280-81). But this surveillance – wrote Picon – would have proved wholly ineffectual if there had been no consensus between workers and director. Thus, if the ellipse (or rather the circle) is a form of surveillance, it could also be considered the form of the social contract: “the factory and its environs were the framework for a perfectly adjusted social representation; though symbols of the universe, the ellipse and the circle also referred to the notion of a community that was transparent” (Picon, 1992: 281). The same transparency was invoked by Jobs, who designed the campus as an amphitheatre, which should be a symbol for sociability.

Although the second project for the Saltworks was an ellipse-shaped figure, morphologically akin to the Apple Park, the first one, a building shaped like a castle, reveals a deeper typological analogy to the Apple project. Here, all the factory’s facilities were arranged in a continuous quadrangular body, creating, according to Antony Vidler, a “type form”, which unified all the community’s needs within a unique diagram, just like Apple’s circle (see Vidler, 2011: 152-161).

Like Ledoux’s design, the Apple strategy is founded on centralization as corollary to colonization. In fact, while Ledoux designed a network of habitations and services that represented an intention to systematically exploit the surrounding territory, the Apple company uses Apple stores as sentinels of consumer taste, placed in the nodes of the global market. The prototypes of residences and workshops located in the forest, at the intersection of some pedestrian paths, designed by Ledoux appear to share similarities with the idea of colonization that Apple carries out through its stores. Indeed, the aim of Ledoux’s *fabriques* was not only to reaffirm the factory’s domain on the countryside but also to reform the habits of the “rude men”. In the same way, Apple tries to convert people to the Apple way of thinking through both its physical presence in the city and through virtual means of visual and psychological persuasion. It seems possible, albeit provocative, to make a formal comparison between the Le-

doux pavilions and the Apple stores. Ledoux designed each residence as a type of community place, around a main, two-storey-high space, with ovens for heating and cooking at its center. The Apple store prototype, whose center is occupied by particular furniture-like elements in order to exhibit computers, could be seen as a similar space. One of these elements of furniture, the Genius Bar, appears to be borrowed from the concierge desk of the Four Seasons Hotel, the best service experience for employees tasked with testing and reinventing

Fig. 7. Claude Nicolas Ledoux, Royal Saltworks of Chaux, 1773-75, I project.



This visual permeability could be seen as closely tied to the total transparency of the Apple store. But in the latter, we can find a kind of inverse control: what counts here is the possibility of looking inside. The extreme transparency conceals the extreme control.

In any case, although a purely behavioral analogy between Ledoux's Saltworks and Foster's Apple could be plausible, a structural comparison is almost unsustainable.

the retail store concept in the twenty-first century (see O'Grady, 2009: 53-54).

In Ledoux's house of the forest watchman (an open cage where the walls are replaced by square pillars) nothing obstructs the view of this kind of rural panopticon. This visual permeability could be seen as closely tied to the total transparency of the Apple store. But in the latter, we can find a kind of inverse control: what counts here is the possibility of looking inside. The extreme transparency conceals the extreme control. This last point is demonstrated by the house of the barrel manufacturer, which is shaped like a barrel in order to express the scope of the building through its architectural form. In the case of Apple, the *architecture parlante* becomes media architecture, at the service of the network society, as well as the society of control. Indeed, Steve Jobs gave great importance to the concept of media: consider, for instance, the increasingly relevant role of the iPhone launch ceremonies, the new rituals of the network society.

In any case, although a purely behavioral analogy between Ledoux's Saltworks and Foster's Apple could be plausible, a structural comparison is almost unsustainable. In the latter project, an abstract circle simplifies the typology of the amphitheatre, a reference that resembles more the arena in Oakland, where Steve Jobs enjoyed attending concerts, than the Roman archetype (see Isaacson, 2011). The entrance of the building has lost its architectural role, remaining only a transitional space, eventually determined by systems of surveillance. No architectural devices are deployed, nor is any contrast between light and shadow used, and, finally, a kind of coldness without tension runs through the corridors and into the workspaces. We are in a space where architecture accommodates the "nihilism of technology" (Hartoonian, 2006: 5-6), where buildings can be placed on the ground without any particular regard for architectural weight and measures, where buildings can be equally transparent on both sides, where architecture expresses the frictionless flow of money, and where geometry itself can be operationalized as a brand.

Conclusions. Golden Prisons or Utopian City?

With the new campus, Apple emphasizes the company's need to broadcast its presence in the worldwide

economy through the physical certainty of a monument to lasting architecture. If it is true that today mute monoliths have been replaced by the esthetics of continuous obsolescence, through methods like the creation of the surgically young city, or recycling existing buildings by means of surrogates or elegant superimpositions, Apple Architecture shows that the need for “supertechnological monuments”, as Manfredo Tafuri described this kind of building, is still alive in the American corporate culture (Tafuri, Dal Co, 1979: 103; see Tafuri, 1970: 241-281). Also, this position demonstrates that a company’s physical location still transmits the appearance of power. This is why Apple’s most enduring symbol is probably no longer the apple on its products but rather the iconic circle of its campus in Silicon Valley. To some extent, Apple Park in Cupertino will overturn what Reyner Banham called “Silicon Style” (Banham, 1981: 283-290), referring to the kind of informal, *Googie* architecture of the Silicon Valley. The 30-mile spin of the Santa Clara Valley from South San Francisco to San Jose is going to be interrupted by something different from the usual “serious play” (see Wright, 2000: 88-94; Lang Ho, 1995: 70-72). An *object* is arising, no longer arranged according to informal, temporary and flexible patterns, but rather according to specialized, secured and hierarchical spaces, clear and controlled flows. What will it be the result? An unsettling, highway-inspired and scaleless building (perhaps the spaceship anticipated by Jobs) or the nightmare of a technocratic and commodified society, imprisoning young brains in a golden jail?

An *object* is arising, no longer arranged according to informal, temporary and flexible patterns, but rather according to specialized, secured and hierarchical spaces, clear and controlled flows. What will it be the result?

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urbane

design

• *social*

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• *Malmö*

The False Problem of Urbane Design

Fredrik Torisson

Abstract

Urbane design concerns itself with promoting the *qualities* associated with the urban – dynamism, transversal networks, etc. – in places where these do not (yet) exist. Urbane design can be considered a neoliberal off-shoot of ‘urban curating’ and other contemporary forms of extending architectural practice into the social realm. The urbane designer is the creative manager of the creative city, whose specific task is *animating* or *activating* urban space.

Arguing that architectural theory needs to interrogate urbane design beyond the traditional confines of architectural theory, this article addresses three different aspects of urbane design in relation to the mixed-use flagship development *Studio* in Malmö, Sweden. This article makes the case that urbane design plays an important part of neoliberalism’s attempt to portray itself as spontaneous, un-hierarchical and ‘natural’ and calls for a return to the underlying problems rather than focusing solely on their solutions. It is argued that this is a central task for a critical architectural theory at present.

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This latest round of transition still largely follows the by now rather dated recipes of Richard Florida, going to great lengths to portray Malmö as Sweden's creative city *par excellence*; it should be noted that it is not entirely without success.

The programme of the building is deliberately complicated.

Introduction

Slick, curvaceous, and decidedly an aspirational budding landmark, the hulk that is *Studio* occupies a stretch of waterfront in what was formerly a heavily industrialised district of Malmö. Formally, Studio's appearance resembles a physical manifestation of the city of flows; this is manifested in what can – rather oxymoronically – be described as aerodynamic brickwork. Studio constitutes part of the latest round of resurrections in a city struggling to adapt to the hegemony of post-industrial capitalism. It is a development that nervously alludes to the canon of post-industrial port-scapes in cities across the western world that have been regenerated for the benefit of an elusive creative class.

Studio's location is auspicious and effectively blocks the views from a previous incarnation of the creative city – the university library, which had until recently enjoyed splendid harbour vistas – and replacing them with a tower where the sky bar is the prime viewing platform in what must be considered a symbolically loaded gesture on some level. This latest round of transition still largely follows the by now rather dated recipes of Richard Florida (Florida, 2002), going to great lengths to portray Malmö as Sweden's creative city *par excellence*; it should be noted that it is not entirely without success.

The building itself consists of a five-storey podium from which the tower rises a further nine storeys. The façade curves and undulates, disclosing, it would seem, a few of the conceptual aspects of the project in its physical manifestation. The external walls fold in on themselves and turn the building inside out, enclosing the exterior into the interior and vice versa, perhaps symbolically eliminating the role of the building envelope as a divider between an outside and an inside.

The programme of the building is deliberately complicated. The ground floor is public, containing a series of services and restaurants, as well as an atrium whose central focal point is the bleacher-style seating that has become a compulsory component of any creative space, and a multifunctional 'black box' space with a separate entrance. The first floor contains meeting-rooms that are rented out by the hour by the agency Altitude Meetings (who also animate the

ground floor). The eight floors above this level host a variety of offices, rented on short- or long-term basis. Studio is particularly noteworthy as the soon-to-be inaugurated office of the national architect (*riksarkitekt*) will be located here. The national architect's formal employer, the National Board of Housing, Building and Planning, is situated some three hours away in the decidedly less chic Karlskrona, a town most famous as the location of Sweden's foremost navy base. Studio's topmost floors contain Story Hotel, a boutique hotel crowned by the sky bar.

Studio should be considered simultaneously as a building and a concept (in the marketing-world's usage of the word). The building was designed by the Danish architectural studio *Schmidt Hammer Lassen*, while the conceptual aspects – covered by the concept of urbane design developed below – were established by the developer *Skanska*, a formerly local contractor and developer that has evolved into an international corporate behemoth over the last half-century.

This article is organised in seven sections, including this introduction, which constitutes the first part. The second part sets out to contextualise the idea of the 'social turn' in architecture, and how the social turn redefines the role of the architect. Furthermore, it opens up the question of the effects of the social turn on architecture in a neoliberal context. The third part introduces the concept of 'urbane design', a concept developed to analyse the practices of architecture in the neoliberal context of the social turn, these practices are the focus of the remainder of the article.

The fourth part discusses *anticipation production*: the manufacturing of fans, subjectivities and community who eagerly await and promote the coming development.¹ The focus here will be on the marketing manager, or 'concept owner' of Studio, employed by the developer, Skanska, and the campaign before and during construction to firmly establish the concept of Studio in the minds of its future users, and to form a community of like-minded people who identify as part of the Studio network and who promote the development.

The fifth part discusses the establishment of a private/public network dubbed 'The Line', a quango-like network organisation that drives development in the immediate context of Studio. The essay will discuss

1 - I have previously written on the theme of anticipation production in architecture in collaboration, see (Runting, Torisson, 2017; 2018).

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Architectural theory has traditionally focused on the object of architecture, its production, and its representation, but over the last decade it has begun to make headway into what could be considered a parallel development to what art critic Claire Bishop called ‘the social turn’ in the art world.

Studio as one part of a larger development on an urban scale, where brand strategists promote the larger urban development project in a multi-pronged approach to define a playbook for how to build for the creative class. This ambition dovetails neatly with the municipal planning department’s attempt to develop the brand of Malmö through the invention of the so-called ‘4th urban environment’; Swedish urban theorist Carina Listerborn has dubbed this a ‘flagship concept’ (Listerborn, 2017).

The sixth part focuses on analysing the day-to-day management of the private/public areas of Studio, where the event consultant Altitude Meetings organises i.a. public debates on social issues.

In the seventh and final part, I will broaden the analysis of Studio to encompass the wider context of Malmö and set out to discuss the overall implications of urbane design and the analysis of the above aspects. The focus is on how the curation of the life within Studio precludes all other social organisations and solutions than the neoliberal logic governing Studio, and how this logic is perhaps even more problematic as a doxa governing the future of Malmö.

Architecture in the Social Turn

Architectural theory has traditionally focused on the object of architecture, its production, and its representation, but over the last decade it has begun to make headway into what could be considered a parallel development to what art critic Claire Bishop called ‘the social turn’ in the art world (Bishop, 2012), which will be developed below. The focus is on practice rather than theory, and this practice is habitually oriented in opposition to institutions that are perceived as oppressive. Planning as an institution is oftentimes portrayed as heavy-handed and oppressive by practitioners in this social turn. The Berlin-based architecture and art collective Raumlabor, for instance, state that their projects ‘set an ephemeral, soft, playful, flexible, mutant, eventful idea of space against an existing social and spatial ueber-determinacy’ (Raumlabor, 2008: 3), or, in the case of the Paris-based *atelier d’architecture autogerée*: ‘Issuing from an idea of “direct democracy” rather than “representative democracy”, this transformation affects both places and people, who start to change their roles from mere users to citi-

zens, from mere residents to interventionist residents' (Petrescu, 2005: 50).

The social turn in architecture can be perceived as a shift of focus from the architectural object (i.e., the building) onto the social system generated through a participatory design process. Although they do not use the term, Awan, Schneider and Till have succinctly summed up the approach, writing that there is a need for a wider definition of architecture, where '[b]uildings and spaces are treated as part of a dynamic context of networks. The standard tools of aesthetics and making are insufficient to negotiate these networks on their own' (Awan et al., 2011: 27-28). Precisely these networks are the focus of this essay, to an extent at the expense of the architectural object, the building. My focus here however is not on 'agency', but on how the social practices play out in the context of a neoliberal project centring on the Studio development in Malmö. My aim here is not to lambast the practices and theories of the aforementioned theorists and practitioners; I merely want to suggest that the social turn is *not unequivocally* a resistance to the powers that be, and that appropriation and socially oriented design practices also contain a neoliberal impetus. This text is, in this sense, an attempt at widening the discourse of architecture in the social turn, trying to understand the implications of a social turn in a different context.

The Studio building itself should be understood here as a means to an end rather than the end in itself; it forms part of several networks that aim to develop communities – and subjectivity – that are highly instrumental in the production of a spirit of the creative city. Such practices are commonplace, and usually considered to fall outside of the domain of architecture and architectural theory. I argue that the social turn in architecture makes the analysis of such practices as the flipside of critical spatial practices an urgent task.

Introducing Urbane Design

Urban design concerns itself with the design of streets and squares managing the flows of the city, whilst what I call 'urbane design'² here concerns generating the *semblance* of an urban condition, generating the flows of a city in places where the coveted urban melt-

2 - The term 'urbane' is usually taken to denote a certain sophistication and metropolitan-ness, and these qualities are precisely what urbane design is attempting to translate into spatial production. The term 'urbane design' does not appear to be widely used.

The social turn in architecture can be perceived as a shift of focus from the architectural object onto the social system generated through a participatory design process.

The social turn is *not unequivocally* a resistance to the powers that be.

3 - Urbanesque has previously been used to denote a not-quite urban setting where “urban” thinking or mindsets have supplanted more traditional rural lifestyles’ (Hegner & Jan Margry, 2016). Here, I use the term somewhat differently to denote urban qualities without the undesirable aspects of this; in other words, a space consciously designed to resemble the urban, but without the risks associated with the urban.

Urbane design is about the *quality* of the urban rather than the material condition. Urbane design in this sense is, as the word indicates, only marginally different from urban design, but the extra ‘-e’ is not insignificant.

ing pot of synergies and exciting encounters does not yet exist. In short, urbane design is about the *quality* of the urban rather than the material condition. Urbane design in this sense is, as the word indicates, only marginally different from urban design, but the extra ‘-e’ is not insignificant. Whereas urban refers to a situation, a material condition, of the city, urbane is a quality characteristic of the city. Urbane design concerns itself with the production of this quality that *resembles* an urban situation rather than actually being *similar* to it. Urbane design is, consequently, engaged in the production of the ‘urbanesque’³ rather than the urban, although the distinction is not clear-cut in any way, as the aim is for the urbane to develop into the urban.

What are, then, these urbanesque qualities that what I call urbane design seeks to emulate? The short answer is: the celebrated qualities that Richard Florida assured planners would attract the elusive creative class. In many ways, the creative class can be considered a zombie discourse, a debunked and refuted theory that continues to lumber onwards. The stupendously successful reception of Florida’s *The Rise of the Creative Class* (2002) in planning departments around the world, in spite of the sustained criticism of Florida’s ideas by a broad range of academics (Peck, 2005; Sager, 2011), has left planners with a problem. While *The Rise of the Creative Class* provides a manifesto-like description of what the exalted creative class are drawn to, it provides no manual for how to develop these conditions. Florida’s work is not a design manual as such, and thus the aspirational city that seeks to re-launch itself as a post-Fordist pamperer of the creatives needs to generate the conditions, and also produce the creative class itself, and this requires the development of a strategy. This is where urbane design enters the picture. Urbane design, however, goes beyond the mere support or nurturing of culture: it actively designs it, curates the connections rather than enabling them. Urbane design straddles place-marketing, urban design, architecture, anticipation production, and a range of other activities.

The principal aim of urbane design is to breathe life into not-yet urban space. The urbane designer can be considered an *agent of animation*, a builder of networks. Urbane design goes well beyond the material

domains traditionally associated with planning and architecture. Instead, it sets out to enable the formation of a community corresponding to the perceived demands of the creative class. Depending on how one views the architect (as a craftsman, a scientist, or now, a curator) the task of the architect differs somewhat. Urbane design could readily be considered a 'spatial practice' that is entirely in line with what the Bishop called 'the social turn' in art (Bishop, 2012), here on the scale of the urban(e). One issue needs to be resolved right away: the art that Bishop associates with the social turn orients itself in opposition to neoliberalism, whereas the practices here discussed are decidedly neoliberal; is there a difference? Bishop suggests that the social turn emerged in part from New Labour's policies that sought to instrumentalise art in the service of society (Bishop, 2012: 13). The effect of the social turn, Bishop notes, is a conflation between art and creativity, which proponents of the social turn claim open up the artistic practices to more people. A similar problem exists in architecture, where the architect becomes an 'urban curator' whose practice architectural theorist Meike Schalk has neatly summarised, writing that the 'role of the architect has shifted from the creator of objects to the mediator between actors, forces, processes and narratives' (Schalk, 2007: 159). What I call urbane design here is the neoliberal flipside of the social turn in architecture; it uses the same tools to neoliberal ends. Bishop calls for artists to discuss what it means to do participatory artistic projects *as art*, and the corresponding question could be posed to the architect. What is interesting in the case that I will discuss in this text is that it is not the architect who is the curator or social relations. This role is taken by other disciplinary entities, brand developers, developers, event consultants and so forth, and thus would arguably fall outside of the scope of architectural theory. Here, I argue to the contrary, that if we take the social turn in architecture seriously, urbane design most certainly and urgently needs to be discussed *as architecture*. Architectural theory needs to understand and address the practices and forces at work, as well as their effects. Furthermore, doing so requires that we do not focus exclusively on the spatial practices of those architects who work with the social, but also how similar approaches

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If we take the social turn in architecture seriously, urbane design most certainly and urgently needs to be discussed *as architecture*.

4 - It should be noted that elsewhere, Lazzarato is adamant that the attempt by proponents of 'human capital' to produce a new subjectivity of the entrepreneurial self failed, in part due to the financial crisis of 2007-08, and instead of the entrepreneur, we have indebted precarious workers without the glamour of the creative class. See Lazzarato, 2014: 52-54.

5 - It has since been sold to Kungsleden, another Swedish property manager.

6 - <https://www.instagram.com/Studiomalmö/> [December 5, 2015].

7 - This generic quality to building for the creatives has been pointed out a long time ago, by, for instance, Peck, 2005: 749.

are employed to instrumental ends in the deliverance of the creative city.

Another issue that needs to be addressed at this point is the production of subjectivity that is an effect of urbane design. One hypothesis that the essay will explore is that urbane design is not solely about attracting the creative class, but about *manufacturing* it in places where it is not-yet. The Italian architectural historian Manfredo Tafuri, following the philosopher Massimo Cacciari, argued that the capitalist metropolis at the turn of the 20th century not only served the interests of the Bourgeoisie, but also produced a blasé subjectivity, a consumer who accepted the visual shock therapy of the metropolis submissively and without questions, too distracted to understand its effects (Tafuri, 1976; Cacciari, 1993). This line of thinking could be discussed in relation to Foucauldian 'discipline', and, in a contemporary context, picked up by the philosopher Maurizio Lazzarato in relation to a society of control (Lazzarato, 2006).⁴ It is not far-fetched to consider urbane design a manifestation of a neoliberal production of subjectivity, privileging *connections* as simultaneously means and ends.

Studio

The careful fabrication of Studio's conceptual presence commenced long before the building was constructed. Skanska is in this case both the developer and the manager of the completed Studio building.⁵ Early on, Skanska appointed a 'concept owner' – Andreas Lundberg – whose role was twofold: first, he developed the brand, and then he managed its sustained success, which in turn depended heavily on the urbane qualities established.

In the case of Studio, the 'concept owner' employed Instagram as a tool in the documentation of the anticipation-production.⁶ The content of Studio's account is characterised by a cascade of hipster 'genericana', anxiously curated to project urban cool: Sky bar! Yarn bombing! Black box! Cargo bikes! Table tennis! Baristas! Food trucks! Pop-up-things! Start-up-culture! Industrial chic! etc.⁷ Essentially, it reads like a roll call of the last 15 years' worth of pop cultural references. In addition to this, the account happily portrays inspirational images of The Barbican, Battersea Power Station, and Google, as well as featuring covers of

magazines like *Wired*, *Monocle* and *Fortune*. Interspersed with these images are photographs of smiling construction workers and engineers of Skanska in bright yellow hardhats giving ‘thumbs up’ to the camera. Studio is working very hard to tick all boxes of a contemporary work-life culture, which comes over as somewhat contrived, communicated as it were by the corporate giant Skanska. The outcomes of producing fans and anticipation are multiple. Firstly, there is a celebration of the entrepreneurial, the creative (even here where the path it follows is a standard formula), and, in extension, by attracting people to spend their leisure time in connection with what is, for all intents and purposes, an office hotel, serves to effectively blur the distinction between work and leisure. This is one key aspect of the neoliberal approach to labour, to the point where ‘work on the self’ becomes indistinguishable from labour, as Lazzarato puts it (Lazzarato, 2012: 33). In this case, the work consists of the act of building and maintaining the principal asset of the creative: personal networks.

In the completed building, Lundberg functions in a position that can perhaps best be understood in terms of a *curator of corporations* (my term) as opposed to a manager.⁸ In this role, he is organising (or ‘caring for’, in the title’s original meaning) the building’s content – i.e. tenants – in order to produce the urbane quality of juxtaposition and unexpected encounters:

When working in the Studio building, you will encounter and meet people you would never meet in a regular office building. A large multi-functional space serves as a Studio for film/TV recordings, concert venue, art gallery, theatre/show stage. Additionally, Story Hotel guarantees a lively stream of new, interesting people moving around the building.⁹

As it is presented here, it appears that the concept owner or curator picks tenants with consideration to the experience of Studio as an urbane environment, a form of urbane design. Somewhat counterintuitively, this could be regarded as a form of ‘creative property management’, thus, it can be surmised, adding ‘property manager’ to the list of creative professionals. While it is unclear from the material whether this is actually the case or standard marketing rhetoric, but there is no mistaking the ambition to create a specif-

8 - The difference being that the curator is habitually understood as a creative professional, whose job it is to add (artistic) value to the sorting and relating of the works of art (here tenants) on display. The curator is valued for his/her connoisseurship of art, and in this case, corporations. The manager is the person who sees to the practical sides of the arrangement made by the curator, although the difference is certainly unclear at best. The curator here adds creative value, an instrumental form of value that arguably should be distinguished from artistic value.

9 - <http://www.studiomalmö.com> (under the heading of ‘Play’) [November 30, 2015, since removed]

The concept owner or curator picks tenants with consideration to the experience of Studio as an urbane environment, a form of urbane design.

The additional value on offer in Studio, as compared to other, similar buildings, consists of different and more valuable and unexpected connections.

ic, curated, whole where one encounters ‘interesting people’ that ‘you would never meet in a regular office building’. Studio, the message is, is *different* from all of those ‘regular’ offices: it is *urbane*. In theory, such curating would invariably imply the exclusion of certain tenants who are judged unworthy, who do not fit with the conceptual alignment, and – again, this is speculation – it would serve to collectively form one vision or version of what the urbane quality is, at the expense of all other perspectives. The additional value on offer in Studio, as compared to other, similar buildings, consists of different and more valuable and unexpected connections. Together, the tenants of Studio allegedly form a highly specific community of entrepreneurs with its own social contract. Lundberg notes that: ‘in the modern office, we are letting go of the term “my workplace” in favour of “our workplace”, and the individual’s freedom to choose the workplace best suited for the moment’ (Lundberg, 2014).¹⁰

As the concept owner works partially in the background, and as all of those encounters must have the semblance of chance in order to be perceived as unexpected, there is a process of naturalisation whereby the one vision of the city becomes the shared urban concept, and the place ends up an echo chamber where its own logic is repeated *ad absurdum*. Again, the aim is to provide the semblance of the urbane through active curation of the space, its users, and, as will be discussed, its context and ultimately politics; this is one distinction between urban design and urbane design, although the terms are intertwined at this point.

The Line & the 4th Urban Environment

Both as a building and a concept, Studio is a cog in a more extensive urban project to set the post-industrial wheels in motion. This larger project is here discussed from two different aspects. The first is its practical organization and purpose of the quango behind *The Line*, and the second is the municipality of Malmö’s urban marketing of the ‘flagship concept’ (as mentioned above, I have gratefully borrowed this term from Carina Listerborn (2017)) of the ‘4th urban environment’. The Line is a collaboration between different actors along an imaginary line drawn through the redevelopment neighbourhood of the inner harbour

in Malmö. It is comprised of both municipal actors and corporate actors, as well as state actors such as the public broadcasting network *Sveriges Television* (SVT). Here, I will focus on how the network presents itself, through the publication *The Line Atlas* (in spite of its English title, it is in Swedish), which is sponsored by Skanska. Lundberg is listed in the somewhat unclear role of an ‘inspirational profile’ alongside the names of the editors. Lundberg has also authored one of the book’s prefaces (Riisom, Uesson, 2014). On the municipal website for The Line, the project is introduced thus:

[The Line] is a competitive business environment with cooperation, community and network. The urban environment, the urban life, and the urban spaces are developed in a way supporting operations and working spaces. (Malmö Stad, 2015)¹¹

That this is primarily a development for businesses rather than inhabitants is emphasised repeatedly. The appointed ‘process leader’ for The Line is Helena Uesson, from brand developing agency ‘SHUHUU’, which presents itself as follows: ‘SHUHUU is an innovation studio working internationally with research, user dialogues and campaigns for cities, institutions & private organisations’.¹² In an interview with the local newspaper *Sydsvenskan*, she states: ‘This [that The Line is about businesses, not the urban environment] is important to emphasise. The constitutive idea is to gather all the operations¹³ based here, and increase cooperation, which will ultimately produce growth’ (Stadler, 2014).¹⁴ Furthermore, in the editors’ preface of *The Line Atlas*, of which Uesson is one of two editors, a clear intention is expressed to blur any distinction between corporate territory and public territory. The editors write:

The new urban activity, the workplace of the future, will become part of the urban space and vice versa; the urban space will become part of the workplace. The emergence of new urban operations and innovative urban space is a continuous organic process taking place in our cities. (Uesson, 2014: 8)

To a similar effect, Lundberg, in his own preface, notes that:

11 - My translation.

12 - <http://www.shuhuu.com> [July 5, 2017].

13 - The Swedish term ‘verksamheter’ is ambivalent; it indicates operations or activities that are of either of public or commercial nature, or both, although it usually refers to commercial operations.

14 - My translation.

Interestingly, the urbane qualities of the creative city are pursued on different levels here, including both the community organisation, the design of the material environment, and the workplace in one larger project.

The modern work place is a natural extension of urban space. In many cases, work places are designed with urban planning as their point of departure, and 'streets' and 'squares' are incorporated to make navigation and orientation more comprehensible. This is also why it becomes natural to discuss The Line as an operational development project rather than an urban development project. (Lundberg, 2014: 6)

Urbane design is here the activation of this convoluted public/private space for the sake of the corporate interests rather than for the sake of the city, of the public, or anybody else. The corporate interests are here assumed to coincide with the public interest, and while such an assumption may very well be considered, mildly put, problematic, it is by no means uncommon. Interestingly, the urbane qualities of the creative city are pursued on different levels here, including both the community organisation, the design of the material environment, and the workplace in one larger project.

The envelope and the open spaces inside the building play into the notion of the open, tolerant and creative city where anything could happen. Studio's envelope flips the building inside out, and quite possibly constitutes the material expression of a larger operation of folding space and programme across a largely immaterial space where the (reductive) categories of the urban and the architectural fold into one another, multiplying functions from both sides, seemingly eliminating the distinction provided by the building envelope between inside and outside. The foyer inside the envelope of the Studio building resonates with this urbane arrangement. Its centrepiece is one of the by now ubiquitous 'bleacher-style seating' units; a person entering finds herself on a stage (of sorts), a place where potential spectators may well be eagerly awaiting the new. The space is seemingly democratic, as the visitor figuratively speaking walks right onto the stage and could make her message clear in an ostensibly highly democratic fashion. However, here we have to consider the nature of The Line and the very narrowly defined interests who dominate the immediate context, limiting the almost provocatively declared openness.

This arrangement can be considered an exemplar of what Malmö's planners refer to as the '4th urban

environment'. Interestingly, this concept, developed by the city of Malmö and Per Riisom of Gehl Architects, is itself part of the efforts to attract the elusive auspices of the creative class as a tool for marketing Malmö as a city where new spatial concepts emerge. Carina Listerborn's 'flagship concept' is intended to travel and attract attention as it becomes picked up (Listerborn, 2017). The concept was thus not primarily invented to describe something, but to be effective in a specific way, and it is consequently highly possible that this very text promotes the concept by adding to its renown. As Listerborn points out, the 4th urban environment can readily be considered the neoliberal space par excellence, and is defined in distinction from other urban environments by Per Riisom, director of Nordic City Network (NCN):

The 1st urban environment is the home, the 2nd urban environment is the workplace, the 3rd urban environment is the traditional urban environment (the public environment) and the 4th urban environment is a transitional environment, one that connects the public and private environments. (Riisom, Beier Sörensen, 2009: 190).¹⁵

The delineations between Studio, The Line and the city at large are not marked out, but rather multiplying outwards in a way where Studio multiplies into the urban perhaps more than the urban into Studio – the 4th urban environment constitutes the medium that permits this operation to take place, at least according to the marketing material. Studio's approach is actively mirrored by the urban design/planning project, which is a project of the municipal planning office of Malmö, and explored through the association Nordic City Network, which has published extensively on the subject.¹⁶ The relationship between the urban context, The Line, and the components that are situated along the line, including Studio, is perhaps most accurately described as a sequence of spaces folding into each other, almost, just almost, erasing – or rendering invisible – distinctions. This is the point of Malmö's particular tool for building the creative city, the so called 4th urban environment that is an intentional exercise in folding the spaces, turning them inside out and blurring the borders. Drawing heavily on Florida, Landry and others, The Line con-

15 - It should be noted that the publication referred to here has been updated on the website of NCN, and the version currently available has omitted the English summary to which all quotes of this document refer.

16 - <http://www.nordiccitynetwork.com/publications/> [July 4, 2017].

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The 4th urban environment is the key space in this. The specifically interesting aspect of the 4th urban environment is that it is conceived as a space of pure relationships.

The objective is to produce surplus value according to the logic of the networked economy.

stitutes part of an ambitious attempt at reforming the former industrial centre into a thriving community of the creative class that has yet to arrive in the area. The 4th urban environment is the key space in this. The specifically interesting aspect of the 4th urban environment is that it is conceived as a space of pure relationships:

This effort is more about encounters and networks between individuals than alterations to the physical urban landscape. The people already using The Line have a knowledge and a potential that can be developed further with a more intimate connection to other activities in the vicinity. Corporations can find inspiration and collaborative possibilities where they perhaps would otherwise not think of looking for it. (Dock, 2013)

In this sense, the conception of the 4th urban environment goes beyond any lingering ideas of the agora – it is a far cry from the empty heart envisioned by Claude Lefort (1988). Instead, it is a space that was never intended to serve civil society, only economy (although the two are easily conflated these days). In this sense, the 4th urban environment is not a passively ordered space where law constitutes the protocol, but an actively ordered one with perpetually shifting protocols of varying intensity. The objective is to produce surplus value according to the logic of the networked economy: building relationships and connections that result in projects and profit. As a space, this 4th urban environment is actively ordered, which here means managed, mimicking curatorial practices from the art world adapted for the purpose of producing relationships and, in extension, subjectivities, that can inhabit these spaces. Both Studio and the ‘4th urban environment’ are portrayed, not in managerial terms, but using metaphors from chemistry, bringing back the modern conception of the architect as physicist yet again (Choay, 1997), but here architecture’s role is to ‘catalyse’ the productive relationships of the creative city:

A metaphorical picture of the 4th urban environment could be that of a chemical fusion, in which a new combination of known elements creates elements that have completely new properties and qualities. The 4th urban environment is

exactly such a 'chemical', or rather a social/physical fusion or maybe even a mutation whereby a completely new urban mechanism emerges, with new properties and features. (Riisom, Beier Sørensen, 2009: 192)

In other words, the point is to build new and productive relationships, to enable meetings or encounters, events and other aspects that may ignite the creative spark that is the surplus value of this endeavour. The role of the curator is carefully downplayed; note for instance the metaphors using chemical compounds above, with no mention of the chemist who mixes them, thereby making the process appear natural rather than produced.

Essentially, this is a managerial approach to spatial production, actively building relations rather than providing a setting for relations to develop. This is a change that the planners see as necessary in the knowledge society: 'The 4th urban environment is driven forward by new requirements in the knowledge society – including the need to build relationships.' (Riisom, Beier Sørensen, 2009: 191). It is clear in the definition that it reads also as a manifesto for Studio and other concept/buildings along the line:

The multi-functional 4th urban environment is qualitatively different. Instead of simple crowding together, it is rather about a three-dimensional, spatial compression of original urban elements. In short, individual building mass and urban environments blend together in a fusion. They pervade each other, thus creating a completely new hybrid form of environment and building, which is both open and closed, public and private, indoors and out, well-defined and non-defined. A form of urban relativity theory in practice. (Riisom, Beier Sørensen, 2009: 191)

The planners are explicit that this is not a public space: 'The 4th urban environment is therefore not the public environment. On the contrary, it is physically seen as something in between, a transitional environment, a hybrid between the public and the private.' (Ibid.). What is omitted, but what I want to discuss here is the role of the curator: how this environment is activated, and what the wiggle room is here.

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Essentially, this is a managerial approach to spatial production, actively building relations rather than providing a setting for relations to develop.

17 - <http://altitudemeetings.se/samhallsdebatt/> [July 21, 2017]; my translation.

18 - <http://fores.se/about-fores/> [July 21, 2017].

19 - My translation.

20 - My translation.

The claim here is that the questions are apolitical, it is the answers that are political, which is problematic on several different levels.

Studio: Lab

In addition to the areas managed by the ‘concept owner’, Lundberg, there are other spaces in need of animation within Studio itself: the central ground floor space, the public arena that seamlessly blends with the urban fabric of The Line, and the multi-functional ‘Black Box’. The public and meeting areas in Studio are managed by the meeting consultancy Altitude Meetings. Altitude Meetings present themselves as a meeting- and event consultant ‘driven by a strong urge to change society for the better’.¹⁷ Altitude Meetings provide an infrastructure for meetings and consider themselves politically independent, although their website notes their collaboration with Fores, a liberal-green think tank whose name is an acronym of ‘Forum for Reforms, Entrepreneurship and Sustainability’.¹⁸

Altitude Meetings have two roles in Studio: they manage the conference facilities, and they animate the space on the ground floor; in connection with this, they have formed the ‘problem-formulation-laboratory’,¹⁹ Studio: Lab. This is a laboratory with the purpose of providing a forum for unprejudiced public debate on social issues. Altitude Meetings argues that while Studio: Lab may be analogous to a think tank, it is essentially different. In an interview, also in the local newspaper, one of the heads of Altitude Meetings, Andreas Mildner, explains the difference:

We do not promote the answers, but instead focus on what the problems are that need to be resolved, which permits us to act in an apolitical way. It reminds me of journalistic approach: what precisely is the problem that we need to discuss? (Mildner in Gillberg, 2016)²⁰

The claim here is that the questions are apolitical, it is the answers that are political, which is problematic on several different levels. First, as French philosopher Gilles Deleuze argued, drawing on Henri Bergson – any problem gets the solution it deserves. In this sense, it is the *problem* that is political, rather than the *solution*. Deleuze reminds us:

[I]t is the solution that counts, but the problem always has the solution it deserves, in terms of the way in which it is stated (i.e., the conditions under which it is determined as

problem), and of the means and terms at our disposal for stating it. In this sense, the history of man, from the theoretical as much as from the practical point of view is that of the construction of problems. It is here that humanity makes its own history, and the becoming conscious of that activity is like the conquest of freedom. (Deleuze, 1991: 16)

From the perspective of Studio: Lab, the question is in itself considered apolitical, which in turn is a statement that evidences what Spencer refers to, drawing from Dardot and Laval, as neoliberalism's 'truth game'; the transformation of the starting points for thought and problematizing (Spencer, 2016: 2-3). In the case of Studio: Lab, this is further exacerbated by the very consciously narrowed down and instrumentalized place in service of the creatives. Ultimately, as Claire Bishop discussed in relation to Rikrit Tiravani-ja's work *Pad Thai*, those who feel compelled to attend the session will in effect be those who already belong to the same class, in spite of the event ostensibly being open to all (Bishop, 2004). This is one of the central tenets of urbane design; it is not about borders but intensity, a demarcation of territory that is imperceptible to those on the inside.

The result is a homogenisation that is exclusive of all those who do not belong to the creative class, thus creating an echo chamber for the elitist consumers of this class without input or dissensus. Jamie Peck notes in his critique of Florida that the creative city is 'about nurturing and rewarding creativity, not compensating the creative have-nots' (Peck, 2005: 762). In this sense, the social discussions of Studio: Lab become an educational forum, establishing the 'real' problems, and, implicitly, how to solve those problems. As those in attendance will most likely belong to the same societal group (creative professionals), the solution is not given, but it is presumed that the question is.

The Wider Context of Urbane Design

We could discuss the three practices outlined above as the definitional work of the group, the space, and the discourse for the urbane project aimed at animating the project in a highly specific way. The urbane designers – the agents of animation – play several roles in different practices. In this sense, urbane designers come across as figures of a certain authority in one

The social discussions of Studio: Lab become an educational forum, establishing the 'real' problems, and, implicitly, how to solve those problems.

Urbane designers come across as figures of a certain authority in one practice, and simultaneously present themselves as concerned participants of the community, lending their activity a certain democratic legitimacy and promoting the notion of self-organisation and spontaneous urban qualities in others.

practice, and simultaneously present themselves as concerned participants of the community, lending their activity a certain democratic legitimacy and promoting the notion of self-organisation and spontaneous urban qualities in others. In effect, the spaces are continuously curated; there is a structured team of urbane designers behind it all, *éminences grises* who manage the urbane. Neoliberalism has been characterised as an 'ideology without ideology' (Spencer, 2016), which is part of its 'truth game'. Here, this comes across through various interwoven territories of animation that provide the semblance of the urban, the urbane qualities sought after in the creative city. The reading I have provided here would fall outside of architectural theory, yet I want to repeat that if we take the 'social turn' in architecture seriously, we need to soberly analyse how organisation of social space is also instrumentalized to neoliberal ends. Yet, it is difficult to delineate such a theoretical approach; architectural theory has been focusing either on the architectural object, its representation, or the work of the architect herself. In the situation discussed here, the architectural objects are considered instrumental in urbane design, and none of the agents of animation are architects; there is thus very little provided in the way of a foothold for architectural theory. An analysis of the Studio building, its drawings or critical reception would provide very few insights into the broader picture, and a focus on the architects' work here would presumably leave us discussing the role of the architect (which here appears to be as an 'expert' rather than a 'manager' or 'curator').

To me, this is essentially the crux; in the newspaper articles, in architecture journals, and in other media, this is, with few exceptions, invariably addressed in a celebratory fashion, affirming the 'spin' of the narrative promoted by the dynamic city of Malmö and its entrepreneurial spirit. When this narrative clashes with other, darker, narratives of Malmö – e.g. Malmö is a city with rapidly growing inequality and the highest levels of child poverty in Sweden²¹ – the 'natural' response is to extend the practices of urbane design to the impoverished areas, thus purportedly helping the inhabitants, as Jamie Peck illustratively puts it, 'to pull themselves up by their creative bootstraps' (Peck, 2005: 757).

There is a plethora of problematic aspects to this. Here, at the end, I will briefly discuss two aspects of what the practices of urbane design mean when they are exported as the solution to other parts of Malmö. Firstly, as Peck reminds us, the theories of the creative class are actively ‘unthinking’ the not-creatives. In requiring cities to exert themselves and focus their attention on the well-being of the creative class, the whole point is to focus on what is perceived as positives; the success of the creative class is the whole point of the discourse, thus rendering everybody who does not fit this ‘spin’ of success invisible. Put mildly, this is a problematic way of addressing social inequality that serves to hide problems rather than addressing them.²²

Secondly, even if the plans to export the creative city to the housing estates are followed through, the spontaneity and self-organisation are at least partially mythical, as discussed above, the presence of curatorial elements to provide the ‘right’ kind of dynamism has been considered essential, and the urbane designers are necessary elements. This homogenous dynamism will surely be the recipe for the housing estates, thus requiring conformity to the established models of creative expression rather than any free-for-all creativity.

Social democracy’s recipe for poverty alleviation has then, a little pointedly, become to simply produce creatives in the housing estates.²³ Rather than addressing the systemic issues of poverty, of social injustice, of rapidly rising inequality, a recipe is prescribed that actively renders invisible all of those ‘uncreatives’ who do not manage to embrace the entrepreneurial spirit, and who have no place in the creative city. The problem stated as *‘how can we integrate the impoverished parts of Malmö in the creative knowledge city?’* is – referring back to Mildner and Studio: Lab – what Deleuze would call ‘the false problem’ (Deleuze, 1991), and it is by no means an ‘apolitical problem’. It is the nature of the *problem*, not its solution that urgently needs to be discussed, and this is also a question for architectural theory.

22 - The response from proponents of the creative discourse would be that the creative city aims to de-stigmatize urban areas. While this is indisputably important, it needs to be accompanied by efforts to curtail the negative effects of gentrification, which appear to be tertiary to growth and creativity – especially since rising house prices are considered an indicator of successful urbane design.

23 - It should be noted there are many examples of more relevant social work; however, the recipes of the creative city are currently being rolled out with great fanfare in Rosengård, a large housing estate in Malmö with high levels of poverty, through a Private/Public Partnership that comes at the price of the municipal housing corporation selling off a fair percentage of its assets in the area. See <http://culturecasbah.com> (accessed July 22, 2017) and (Baeten et al., 2016).

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Deleuze

• *Marx* •

surplus

value •

*capita-
lism*

Flows of Capitalism, Flows of Architecture

Tim Gough

Abstract

How can architecture, a discipline so tightly intertwined with money, resist neoliberalism? Is architecture inevitably consigned, with Tafuri or Aureli, to a stoic or eremitic resignation? Or, with Sorkin, to a series of disconnected tactics? This paper takes a hint from Fredric Jameson to suggest that Deleuze and Guattari's positive transformation of Marx's quintessentially capitalist notion of surplus value can allow us to rewrite the ontology (and epistemology) of architecture as a differential and multiple reticulation. Architecture conjugates all sorts of things ("flows", in the terminology used here) to create a surplus value beyond (or before) the capitalist surplus value that is only one negative instance of a broader positive phenomenon. This non-essentialist and non-formalist idea of architecture allows us to respond to Spencer's criticism of the neoliberal "architectural Deleuzism", and shows how effective political action is entirely feasible within the broad discipline of architecture.

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Neoliberalism and architecture

Fredric Jameson, in his 1982 lecture 'Architecture and the Critique of Ideology,' juxtaposes Manfredo Tafuri's Marxist critique in *Theories and History of Architecture* and *Architecture and Utopia* with the postmodernism of Venturi, Scott Brown and Izenour's *Learning from Las Vegas*, and comes to the following conclusion:

Is it possible that these two positions are in fact the same, and that as different as they may at first seem, both rest on the conviction that nothing new can be done, no fundamental changes can be made, within the massive being of late capitalism? What is different is that Tafuri's thought lives this situation in a rigorous and self-conscious stoicism, whereas the practitioners and ideologues of postmodernism relax within it... (Jameson, 1986: 461)

For Tafuri, architecture inevitably operates within the hegemony of capitalism, and is necessarily intertwined with it in such intimate manner that there is no possibility of effective critique or political action from within architecture (however defined). As Jameson points out, this stance is predicated on the hope of a future total revolution that would be the dialectical counterpart and overthrowing of the similarly total scope of current capitalism. Until then, the political capacity of architecture is strictly limited, and for Tafuri '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 systemic transformation' (Jameson, 1986: 452). On the other hand, for Venturi *et al*, and postmodernism in general, this inevitable intertwining is taken as a positive possibility for a creativity that at once celebrates and enables the capitalist enterprise: 'The commercial strip, the Las Vegas strip in particular – the example *par excellence* – challenges the architect to take a positive, non-chip-on-the-shoulder view. Architects are out of the habit of looking nonjudgmentally at the environment, because orthodox Modern architecture is progressive...' (Venturi, Brown, Izenou, 1977: 3).

More recently, Douglas Spencer, who makes reference to Jameson's article, essays the same ground (Spencer, 2011). Although the personalities are different, the

possibilities are similar, but pushed to extremes. The total scope of capitalism has been confirmed, beyond the dreams of either its 1980s adherents or critics: the neoliberalism ushered in by Augusto Pinochet's Chile and Margaret Thatcher's UK has achieved global scope, be it in the guise of totalitarian capitalism, 'democratic' capitalism or (with Trump and Putin) oligarchic capitalism. With this, architectural resistance appears all the less possible. Spencer's unenthusiastic references to Brutalism and Modernism reiterate Tafuri's scepticism and posits no clear strategy for a contemporary architecture of capitalist opposition (Spencer, 2014: 88). The place of architectural postmodernism has been taken by an architecture that more effectively reflects neoliberalism, again well-essayed by Spencer. These include Alejandro Zaera-Polo, who, as Spencer puts it, thinks it 'probably best not to speak any longer of large totalities such as capitalism or society' (Spencer, 2014: 83; Zaera-Polo, 2008: 101); or Patrik Schumacher, who sees 'no better site for a progressive and forward-looking project than the most competitive contemporary business' (Schumacher, 2005: 79). Schumacher here redefines the terms of the debate in order to emasculate any attempt at social criticality in architectural discourse or avant-garde design. As Venturi et al. noted in the quotation above, in the 1980s the term 'progressive' architecture invoked a socially aware and left-oriented practice; for Schumacher, this meaning of the term must be ruled out, and the word appropriated by the discourse of neoliberalism. In the 1980s Venturi and Scott Brown did at least keep one eye on the question of social engagement, and felt it necessary to make a slightly apologetic reference in the second revised edition of *Learning from Las Vegas* to Scott Brown's article 'On Architectural Formalism and Social Concern: a Discourse for Social Planners and Radical Chic Architects'. One finds little sign of such scruples in today's putative architectural avant-garde. In the face of these two alternatives – the resignation of Tafuri or the acceptance of Venturi, Scott Brown, Zarea-Polo and Schumacher – Jameson briefly suggests another oppositional route via Antonio Gramsci's strategy of zones of culture resistance to capitalist hegemony – a 'war of position' and tactics rather than the decisive and strategic Leninist 'war of manoeuvre'.

The neoliberalism ushered in by Augusto Pinochet's Chile and Margaret Thatcher's UK has achieved global scope, be it in the guise of totalitarian capitalism, 'democratic' capitalism or (with Trump and Putin) oligarchic capitalism. With this, architectural resistance appears all the less possible.

The educational apparatus of architecture is being ever more closely integrated with neoliberalism and the production of what Maurizio Lazzarato has called ‘indebted man’ via student loan systems in the States and the UK.

vre’ (Gramsci, 1992: 217-219). This “war of position” needs to be distinguished from one of Gramsci’s other key ideas of “passive revolution”, which refers to the ways in which the bourgeois effect non-revolutionary transformations in order to secure their dominant position (Callinicos, 2010). It is the task of the properly progressive architect to make counter-proposals within their local situation, some situation which they make ‘other’ to the situation of capitalism: ‘the very existence of such an ensemble in some other space of the world creates a new force field which cannot but have its influence’ (Jameson, 1986: 455). Such a situation, for Jameson, might involve the construction of buildings (he cites Stalinallee in East Berlin) or it might involve Utopian proposals or architectural ideas (Jameson, 1986: 454). Jameson does not develop this thought in any detail, but it is possible to see how architecture might operate at this molecular level and how, therefore, architects can take action. Douglas Spencer’s writing is already an example of this at the level of ideas, and not the only one. Elsewhere, although the educational apparatus of architecture is being ever more closely integrated with neoliberalism and the production of what Maurizio Lazzarato has called ‘indebted man’ (Lazzarato, 2012) via student loan systems in the States and the UK, it is probably still possible to introduce pedagogic projects which propose some level of political engagement or questioning of the system under which they operate via proposals which undercut capitalist assumptions, perhaps in addressing the marginalised and the precariat in ways which do not subsume them into this same debt machine. In these locations, as elsewhere, what must be fought against is the tendency of capitalism to play the ‘truth game’ of naturalising its position by establishing what Roberto Mangabeira Unger long ago termed the ‘False Necessity’ of neoliberalism. What is needed, he posits, is an anti-necessitarian social theory (to paraphrase the title of one of his books): we must not give in ‘to the ideas and attitudes that make the established order seem natural, necessary or authoritative’ (Unger, 2004: xx).

For Pier Vittorio Aureli, by contrast, the possibility of resistance is related to ‘The Possibility of an Absolute Architecture’ of the archipelago, and operates not at the level of ideas or utopias but with architectur-

al form, which for Aureli represents the reality of architecture properly defined. The task of the architect is to ‘confront the forces of urbanization’; Aureli uses this term ‘urbanization’ to name the closed organisational logic of capitalism. This confrontation is achieved by ‘opposing to urbanization’s ubiquitous power their [the archipelagos’] explicitness as forms, as punctual, circumscribed facts, as stoppages’ (Aureli, 2001: xii). Aureli looks at Palladio, Piranesi, Boullée and Ungers – the last being the source of the notion of the architectural archipelago – and shows in each case ‘how the project of a specific architectural form is at once an act of radical autonomy from and radical engagement with the forces that characterized the urbanization of cities’ (Aureli, 2011: xii). Here is posited – and we can see it clearly in Aureli’s beautiful drawn architecture too – the possibility of resistance within constructed architecture itself (as Jameson saw in the Stalinallee). But we can immediately anticipate an objection to this: is not the reduction of architecture and its possibilities of resistance to questions of architectural form precisely that – a *reduction* to a limited area of concern which disturbs neoliberalism not one bit. In contrast to Zaera-Polo or Schumacher, architectural form can for Aureli become a resistance to organisation rather than a celebration of it, but at the cost of shrinking its ambition. This tendency is taken to its logical conclusion in Aureli’s idea of an essentially eremitic architectural practice, a practice withdrawn from the world into a notional hermit’s cell, inspired, as Spencer shows, by Franciscan monastic life (Aureli, 2013; Spencer, 2017). This represents the end-point of Tafuri’s stoicism: if there is no effective architectural resistance to be found against the capitalist hegemon, then a withdrawal into the monastic cell, and the production of an architecture of pure form, is perhaps the most honest and realistic of responses.

Michael Sorkin makes arguments, largely of a Jameson/Gramscian type, in the afterword to Peggy Deamer’s *Architecture and Capitalism*. Noting that ‘the inevitable nexus of architecture and capital is one of its core fascinations’, he goes on to outline nine possible tactics for how architecture might ‘live without capitalism’. He begins, *pace* Aureli, by dismissing the possibility that architectural form might do the job:

Is not the reduction of architecture and its possibilities of resistance to questions of architectural form precisely that – a *reduction* to a limited area of concern which disturbs neoliberalism not one bit.

In what way are these tactics architectural in intent? For sure, the architect can deploy them, but what is architecture such that this deployment would form a part of the discipline or the phenomena of it?

‘Architectural form has completely lost its power to be dangerous and only its absence – or violent destruction – threatens anyone’ (Sorkin, 2017: 217-220). What might do the job are respectively: the political demand for redistribution; a Ghandhian refusal to play ball; a celebration of the informal not as a ‘state of exception’ but rather, with Ananya Roy (2005), as an idiom practised outside the hegemony of neoliberalism; the demand for a space of occupation; a newly reawakened tactic of the *flaneur*; a celebration of the body’s corporeality and the possibilities of the visionary; a return to socialism, a demand for a larger state; and finally – tongue-in-cheek – a becoming pure mind, defeating property by means of a digital future. This list of possibilities should not be dismissed, and indeed as a series of political manoeuvres some of them have the potential for effectiveness, or failing that represent at least a call to moral action. However, in respect of whatever specificity we may assign to architecture, Sorkin’s list *seems* to fall short. In what way are these tactics *architectural* in intent? For sure, the architect can deploy them, but what is architecture such that this deployment would form a part of the discipline or the phenomena of it?

We perhaps therefore need to be more specific about what is meant by architecture. Are we referring to the academic discipline? the politics of space? the architectural profession? a building? a set of buildings? Or the creation or production of these things?

Surplus value

Returning to Jameson and Spencer, there is a hint in their work as to how architecture and capitalism might be characterised through the work of Gilles Deleuze and Félix Guattari. In a long footnote, Jameson picks up on the possibilities of their concept of the rhizome outlined in *A Thousand Plateaus*, published two years before Jameson’s lecture. In Spencer, Deleuze is framed as a missed, or misused, opportunity: he pejoratively gives the work of Schumacher, Zaera-Polo and others the name ‘Architectural Deleuzism’ (reworking a term from Ian Buchanan, 2000). This is not entirely to dismiss the philosophy of Deleuze, but rather to show how it has been misused in the name of a formalism of flow – ‘the smoothed forms and undulating surfaces that characterise the

projects of practices such as Reiser + Umemoto, [Lars] Spuybroek's NOX or Ali Rahim and Hina Jamelle's Contemporary Architecture Practice' (Spencer, 2014: 88). The reduction of architecture, and specifically a putative avant-garde architecture, to the question of form is, for Spencer, a sub-set of the generalised political move to extirpate the left-wing politics from the work of Deleuze and Guattari. In this he sees Manuel De Landa's de-politicised interpretation as being particularly pertinent to architectural debate, given the influence De Landa has had on the aforementioned formalist reception of Deleuze in architectural theory and practice. Spencer notes that De Landa effects a consistent de-Marxification of Deleuze (Spencer, 2014: 92), and points us to Eliot Albert who succinctly states that 'De Landa's misreading of Marx thus becomes... a grotesque misrepresentation of Deleuze and Guattari's work' (Albert, 1998). This de-politicised Deleuzian strain of architectural theory was perhaps most effectively promoted by Sanford Kwinter, whose seminal *Architectures of Time* cast Deleuze as a scientistic formalist whose interest in, for instance, the political and minoritarian side of Kafka was merely a result of the supposedly baleful (i.e. political) influence of Guattari (Kwinter, 2001: 115). By contrast, Albert points us back to Jameson who, he notes, states that 'Deleuze is alone among the great thinkers of so-called poststructuralism in having accorded Marx an absolutely fundamental role in his philosophy' (Jameson, 1997: 395). For Jameson, the positive quality of Deleuze and Guattari's *Capitalism and Schizophrenia* (the overall name for the two volumes comprised of *Anti-Oedipus* and *A Thousand Plateaus*) is the way it maintains Marxism as a *problematic*. Daniel W. Smith argues that the whole of Deleuze's work (in contrast to that of, say, Alain Badiou) is 'problematic' (Smith, 2003), and it is within this problematic that he and Guattari give their definitive characterisation of capitalism, and with it neoliberalism, as a politics of flow:

Decoded flows – but who will give a name to this new desire? Flows of property that is sold, flows of money that circulates, flows of production and means of production making ready in the shadows, flows of workers becoming deterritorialized: the encounter of all these flows will be necessary, their conjunction, and their reaction on one another – and the

contingent nature of this encounter, this conjunction, and this reaction, which occur one time – in order for capitalism to be born... (Deleuze, Guattari, 1983: 223-224)

What is a ‘decoded flow’? They later state:

At the heart of Capital, Marx points to the encounter of two ‘principal’ elements: on one side, the deterritorialized worker who has become free and naked, having to sell his labor capacity; and on the other, decoded money that has become capital and is capable of buying it... (Deleuze, Guattari, 1983: 225)

This is the Marxist heart of the ‘decoding’ of capitalism. The status of the worker is decoded such that she loses all value and meaning, aside from that of pure labour to be utilised. The status of money is decoded into capital and freed, again, from meaning – a process which continued with the increasing abstraction of money through the development of capitalism into neoliberalism. What gets this whole concept of flows going is the main idea of Marxism, the notion of surplus value, which Marx deals with in Part Three of *Capital* entitled ‘Production of Absolute Surplus Value’ (Marx, 1930: 171-322). The capitalist is the one who extracts a surplus value from the use-value of the worker’s productive capabilities. The value to the capitalist, making use of the worker, of the worker’s time is greater than what it costs him, and therefore there is an exploitative production of surplus value, a process of ‘creating value’ (Marx, 1930: 193). In creating this additional value money is transformed into capital: ‘the trick [of capitalism] has at last been successful, money has been changed into capital’ (Marx, 1930: 189), and in volume two of *Capital* Marx shows how this surplus value moves onwards through the system of the circuits of money capital, productive capital and commodity capital (Marx, 1978: 109-196) Eliot Albert points us to a key quotation, at the beginning of *Anti-Oedipus – Capitalism and Schizophrenia*, in relation to surplus value (Albert, 1998), where Deleuze and Guattari state the following:

In a chain that mixes together phonemes, morphemes, etc., without combining them, papa’s mustache, mama’s upraised arm, a ribbon, a little girl, a cop, a shoe suddenly turn up. Each chain captures fragments of other chains from which it

‘extracts’ a surplus value, just as the orchid code ‘attracts’ the figure of a wasp: both phenomena demonstrate the surplus value of a code.... If this constitutes a system of writing, it is a writing inscribed on the very surface of the Real.... (Deleuze, Guattari, 1983: 39)

It is evident from this passage that Deleuze and Guattari both *generalise* the concept of surplus value, and make it positive, as part of what Alberto Toscano has called “in the great operation done on Marx in the first chapter of the *Anti-Oedipus*” (Toscano et al., 1999: 125). This means that the underlying abstract workings that allow capitalism to be effective can be assessed positively. There is always a Nietzschean undercurrent to Deleuze, an avoidance of all *ressentiment*, as outlined in his early book *Nietzsche and Philosophy*. He is suspicious of the depreciation of life, of the Real: ‘For the speculative element of negation, opposition or contradiction Nietzsche substitutes the practical element of *difference*, the object of affirmation and enjoyment’ (Deleuze, 1983: 9). Deleuze and Guattari’s insight is to understand that, if Marx’s notion of surplus value is critical to an understanding of and the reality of capitalism, then this notion must perforce have a *general positive import* from which the specific negative phenomenon that Marx highlights *must* derive. I say ‘perforce’, in the sense that this is a question of forcing, a question of a choice that Deleuze and Guattari make, a bias they have or a Spinozian prejudice for the positive that is evident throughout their work and that comes into play in a number of locations – for instance, in relation to the interpretation of Foucault where Deleuze will transform and positivise Foucault’s notion of power by saying that it ‘produces reality before it represses’ (Deleuze, 1988: 25).

Thus it is always necessary, for Deleuze and Guattari, to delve below the negative and critical positions of a Foucault or a Marx – to delve beneath the Foucauldian concept of ‘power’ as essentially repressive and beneath the concept of ‘surplus value’ as essentially capitalist. Jameson noted a change in valence between Tafuri’s negative stoicism and the postmodernist’s positive taking up of capitalist themes. There is a similar change here, not to support the capitalist hegemon but rather the opposite. This change in valence

Marx and Foucault are critical (amongst other things), and that is necessary, but is only a preliminary step. It is preliminary because the moment of critique is reactionary: it remains on the same level as that which it wishes to attack.

is undertaken not merely because in this philosophy all essentialism is to be deprecated, but more substantially in order to find, with Nietzsche, the underlying non-essential positive flow that gives politics-as-repression and capitalism their possibility. This flow is non-essential because it is *differential*; that is, it starts from the affirmation of difference(s) inherent in the relationships (or power or surplus value) prior to the selection of the positive terms of those relationships (the political subject or the worker and the capitalist). This is why, as Deleuze and Guattari state *vis-à-vis* Kafka, '[c]riticism is completely useless' (Deleuze, Guattari, 1986: 58). Marx and Foucault are critical (amongst other things), and that is necessary, but is only a preliminary step. It is preliminary because the moment of critique is reactionary: it remains on the same level as that which it wishes to attack. But the enemy, with Kafka, must be fought below (or above), on a different level. The call is to find the underlying, positive flow, the flow which has been hitched up to capitalism and to repressive politics; do not, our authors tell us, be satisfied with criticising that which makes use of it!

The transformation effected here by Deleuze and Guattari is that surplus value becomes 'the surplus value of a code'. What does this mean? It is clear that this code has nothing to do with meaning. In this respect, Deleuze and Guattari's concern is quite different to that of, say, Henri Lefebvre, whose *The Production of Space* locates the codes of space within a representational ontology entirely foreign to our authors' concerns (Lefebvre, 1991: 1-67). For Deleuze and Guattari, what it has to do with are chains, multiplicities or flows that relate to each other and to other multiplicities or flows, interpreted within an avowedly non-representational philosophy. For example, the chain, multiplicity, or flow that makes up the orchid 'attracts' the flow that makes up the wasp. This gives surplus value, by the fact of synthesis – of what they call the 'great disjunctive synthesis' (Deleuze, Guattari, 1983: 44). The orchid seduces the wasp, the wasp gains the pleasure of nectar, the orchid gains the possibility to reproduce, and surplus value is thereby created. In this synthesis one of the flows interacts with other in 'endlessly ramified paths' (Deleuze, Guattari, 1983: 44). The paths are

ramified because the interplay of the wasp and the orchid constitutes for neither of them the total of their interplays; each has an indefinite number of other symbioses within which they play (the wasp with the air, with its co-workers, with its nest... the orchid with its leaves, its mycelia, the rain, the sun...). For Deleuze and Guattari, following Spinoza, these syntheses are nothing other than the Real, and this Real is a sort of writing, but not a writing with meaning or signification, but rather a writing that produces desire. That is, it produces *difference* or *power*, the milieu or element within which these syntheses occur and which are the 'object of affirmation and enjoyment'.

The negative Marxist surplus value of capital becomes here a subset of a more general reality of the surplus value of code. In turn, the notion of flow, which characterises capitalism in its flows of labour, urbanity, property and money, is also shown to have a general ontological value as a 'flow or a nonpersonal *hylè*', an element or ether within which or on which things 'take' as so many after-effects of difference.

It is this general ontology of flows which we should refer to in relating these thoughts about capitalism to the question of architecture and its possible response to capitalist flows. As noted in section one above, there is a general sense in which the ontology of architecture, within discussions about its relation to capitalism and elsewhere, remains unclarified and un-thought. The concepts of capitalism (flow and the creation of surplus value) are generalised by Deleuze and Guattari such that they can form the elements of a general ontology – or rather, *the* general ontology of flows outlined in *Capitalism and Schizophrenia*. This ontology does not derive from capitalism. Rather, capitalism is so successful precisely because it responds to and works with the Real, albeit in a negative way. Despite this capture, it is still possible – and necessary – to start from this general ontology of the Real and to ask, in that light: what is the ontology of architecture?

Architecture as flow and haecceity

If architecture is a multiplicity, if it is *itself* flows, what differences, what syntheses or symbioses go to effectuate it? We can take a clue from the wasp and the orchid, where two flows (each making up the individ-

This Real is a sort of writing, but not a writing with meaning or signification, but rather a writing that produces desire. That is, it produces difference or power, the milieu or element within which these syntheses occur and which are the 'object of affirmation and enjoyment'.

Architecture works with, and works over, economic flows, flows of material, flows of thought, flows of memory, flows of history, flows of technology, flows of concepts and ideas, and of course political flows. This list could be extended indefinitely, because it is derived not from any essentialist notion of what architecture is but rather from the empirical reality of architecture.

ual wasp and orchid) meet briefly to extract a surplus value of code. The flows which make up the individuals which we can distinguish as architecture, in all its various meanings as profession, production and inhabited environment, are equally multiple. Architecture works with, and works over, economic flows, flows of material, flows of thought, flows of memory, flows of history, flows of technology, flows of concepts and ideas, and of course political flows. This list could be extended indefinitely, because it is derived not from any essentialist notion of what architecture is but rather from the empirical reality of architecture. (Recall that Deleuze calls himself, many times, an empiricist (Deleuze, Parnet, 2007: xii).) To compile and extend this list we need only ask: what is it that architects (be they academics, historians, designers or critics) and architecture as an entire and broad discipline do, what do they engage with, in reality, in the Real? The concerns of the empiricist, and the implications of an empirical philosophy, are in strong contrast to a tendency for architecture to define itself essentially. To give just a few examples of this essentialising thought: with Alberti, architecture is *essentially* ideational (Alberti, 1991: book eight); with Laugier, *essentially* shelter (Laugier, 1985); with Pevsner, *essentially* an aesthetically considered building (Pevsner, 1957: 23); for Aureli and Kwinter, *essentially* form. Deleuze and Guattari, following Spinoza, have an entirely different strategy: they start not from the essence, but from the Real.

In addition, architecture always works with and works over flows of people and social flows – that is, it works with *us*, be we architects, critics, inhabitants, victims or philosophers. In Deleuze and Guattari's terms, architecture is an 'haecceity'. Traditionally, this word means something like the 'thisness' of a thing. Our authors give it a more specific meaning. In a beautiful passage, they state:

There is a mode of individuation very different from that of a person, subject, thing, or substance. We reserve the name *haecceity* for it. A season, a winter, a summer, an hour, a date have a perfect individuality lacking nothing, even though this individuality is different from that of a thing or a subject. They are haecceities in the sense that they consist entirely of relations of movement and rest between molecules

or particles, capacities to affect and be affected. (Deleuze, Guattari, 1987: 261)

Architecture is just such a haecceity, or such an individual. It is a mode of individuation utterly different from the solidity of a subject, object or substance. Architecture, as flow, is something more like a summer, an hour, a particular date in which we are entwined and which almost pre-exists us, but allows us to come into being at the same time as we help create that very individuality of architecture. There are no pre-existing subjects and objects; these are after-effects, abstractions after the event. The subject – which is supposedly us – and the object – which is supposedly architecture – are terms of a lesser ontology which does not stay true to the flowing reality of the world, and which therefore misrepresents the nature of the Real:

We must avoid an oversimplified conciliation, as though there were on the one hand formed subjects, of the thing or person type, and on the other hand spatiotemporal coordinates of the haecceity type. For you will yield nothing to haecceities unless you realize that that is what you are, and that you are nothing but that. (Deleuze, Guattari, 1987: 262)

But how do flows become haecceities? If architecture is somehow made up of economic, political, material, thoughtful, historic, memorable and social flows, and then in turn flows with us or with *you*, what makes up the *solidity* of architecture? But this is to put the question in the wrong way. There is no solidity of architecture – neither a formal solidity, nor a material one, nor indeed a political or economic one. Deleuze and Guattari do not ask us to create solid elements out of flows; rather their cry is more straightforward and more realistic: ‘conjugate the flows’ (Deleuze, Guattari, 1987: 11). In other words, create surplus value by linking the flows into an haecceity – a haecceity ‘that is what you are’ – by precipitating out from the flows a particular, constructive individuality, but without imputing to this individual a stasis or a solidity. Architecture is too often seduced by the building, by the phenomenal solidity of the objects which it supposedly creates, as if this solidity is an essentially positive quality in itself that should therefore determine

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the ontology – the mode of being – of architecture. Deleuze and Guattari's philosophy of flow, of becoming, presents the most cogent refutation of this view. What the architect should properly intend to create, therefore, is not a building, not a solidity, but this difference, this individual or haecceity or particular surplus value of architecture that consists of a synthesis or conjunction, within which the subject and object are not pre-determined, and which takes into account the responsibility of architecture to engage with a multitude of flows – *including* the political and economic ones which seem dominated by capitalism. By doing this, by undercutting the formation of subjects and objects and creating a space for something other than these pre-formed vessels into which capitalism, above all, pours us, an adequate response to the neoliberal hegemony might be essayed. The counter-argument to the eremitic formalism of Aureli or de-politicised architectural 'Deleuzism' starts from a re-politicisation of the discipline and fact of architecture. It also starts from an engagement with economics, be that the economics of a building project, the broader economics of the distribution of assets (such as housing) within society, or the economics of the marginalised, the immigrant or the 'citizen of the world'. The conjugation of flows that occurs in and as architecture includes politics, just as it includes economic questions or poetic ones; it cuts across the established strata or habits into which thought is commonly solidified, which is in itself a political question – a question of how these habits and strata are policed and kept in their place, particularly but not only within the academy. Likewise, the counter-argument to Tafuri's stoicism rests in understanding politics, and particularly the hegemonic quality of capitalism and neoliberalism, not as a solid body of fact which cannot be gotten around, but as mutable flows which can be redirected and whose quality as flow interacting with other flows is made explicit (Deleuze, Guattari, 1986: 47). If the haecceity of architecture inevitably interplays with the flow of money, this does not rule out political action on any number of fronts, by engaging and conjugating other flows that call into question the overarching power and 'necessity' of capitalism. In one sense this is a policy (with Sorkin) of tactics. His list of anti-capitalist possibilities cited in

section one should be reframed; they are not a series of isolated tactical positions, but rather need to be folded into an overall strategy of multiple flows which allows that political action can advance in many locations at once, hidden from the enemy whose reduction of reality to a single 'truth game' blinds them to the effectiveness of the other conjugated flows.

How therefore to act?

How might this operate in practice? A concrete example, amongst an indefinite number of possible examples, relating to those marginalised figures of capitalism whose position is nearly always, according to essentialist notions of architecture, consigned to the periphery or exterior: does architecture, *qua* architecture, have a responsibility to the worker? For instance, to the worker's safety on the building site? (Spencer gives a well-known example of this question in relation to Zaha Hadid architects. Spencer, 2016: 73.) Or their economic situation? The answer depends on your underlying ontology of architecture. For William Morris, a Marxist for whom the interrelation (following Ruskin) of the worker with the work of architecture was a key architectural (as well as political and moral) issue, the answer was unequivocal: architecture cannot be great architecture unless such things are taken into consideration. But the current hyper-competitive and neo-Darwinist ideology of neoliberalism posits, in necessitarian manner, that the conditions of the worker are a supposedly natural outcome of the economic forces which traverse and make up the workplace. To point to the conjunction of real flows which create the situation of exploited labour; to take the stance, be it in an academic piece of writing, in an architect's office, in a meeting with a client, or indeed in a press release, that this exploitation is not an inevitable outcome; to promote a difference that makes a difference: these are real political and moral acts that will have an effect, whether or not architects are required by law to consider such matters, and whether or not it is fashionable to do so.

If, with Morris, there can be no great architecture without consideration of the flow of labour, I wish to conclude by returning to Aureli, for whom there is no great architecture without the autonomy of form. It is difficult to imagine two further extremes of archi-

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The consideration of form, and the making-autonomous of form, is surely as much one of the flows which characterises the Real of architecture as the flow of labour. It is simply that this autonomy of form must not be solidified into what is *essential* to architecture.

We are called by this philosophy to acknowledge the effectiveness of flows and to conjugate them in a manner which calls into question the false necessity and the operation of capitalism.

tectural thought: labour, and form. But these are not two opposed concepts of architecture. Rather, they are two of the indefinite number of flows which make it up. The consideration of form, and the making-autonomous of form, is surely as much one of the flows which characterises the Real of architecture as the flow of labour. It is simply, if we are to take Deleuze and Guattari and the ontology of flows seriously, that this autonomy of form must not be solidified into what is *essential* to architecture. Neither must anything else. *There is no essence of architecture*: this is what the surplus value of flow tells us, which far from consigning us to the ineffectual gives us the very possibility of action on the Real.

Jameson is therefore not wrong in the final paragraph of 'Architecture and the Critique of Ideology', where he returns to the idea of a 'properly Gramscian architecture' waging a 'gradualist' war of position rather than a revolutionary overturning of the entire 'massive being' of capitalism. Except that within an understanding of architecture as the individuation of flows, we do not reduce effective political action to the negative status of the 'gradual' but rather acknowledge the positive possibility that all action occurs within and amongst multiplicities. There is in reality no massive being of capitalism, if by that is implied a solid block that must be gradually hacked away, or destroyed in one act of revolution. Certainly, there is a massive *effectiveness* of capitalism, but this derives not from its solidity but from its ability to harness flows for the creation of surplus value. But we will not block such flows, neither within architecture nor outside it, by means of solid or essentialist ontologies: instead, we are called by this philosophy to acknowledge the effectiveness of flows and to conjugate them in a manner which calls into question the false necessity and the operation of capitalism. This is not a gradualist capitulation, but rather a harnessing, to better effect, of the underlying flows from which capitalism draws its strength.

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Teaching the Value of Work

Megan Groth

Abstract

Within the architecture profession, issues of pay inequality, lack of diversity, the rising cost of architecture education, and the stagnation of wages has led to research and advocacy from the perspective of the 'Architect as Worker'. This paper explores the complexities of the value prescribed to architecture work by considering three different value systems – economic value, professional value and personal value – to suggest practical ways that the architecture design studio teaching can be augmented to better provide students with skills in the learning environment that will help them thrive in the labor environment.

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The lack of control over investment capital and financial independence for architects leaves them less able to take risks and innovate.

The rampant prevalence of overtime without commensurate pay means that architects do not have the time to engage with the very world in which we work.

The phenomenon of architecture as a ‘profession in crisis’ is well documented and supported by generations of evidence and research. The lack of diversity, high dropout rate of women, low-pay, long hours, rising costs of education, massive student debt, and the alarming prevalence of mental health issues in schools and in the profession at large are just some of the bad news for the future of a profession that is also facing the global challenges arising from automation, climate change and soaring rates of social inequality. These problems are collectively shared, affecting members of the profession as well as the built environment created through the architect’s work. The lack of diversity in the profession renders our collective urban environment as a product creation of a mostly white, upper middle class male experience. The lack of control over investment capital and financial independence for architects leaves them less able to take risks and innovate. The high cost of education and low cost of incoming architect’s salaries reduces a young architect’s ability to explore new and different modes of practice, and encourages an exodus of the best and brightest to more lucrative fields such as UX design instead of expending energy to change architecture for the better. The rampant prevalence of overtime without commensurate pay means that architects do not have the time to engage with the very world in which we work, dedicating less time to volunteering or social and political engagement around issues that affect our work. Combined, it results in a profession that is slow or unable to innovate and adapt to change, destined to be a subject to external forces rather than a leader.

If this is the labor environment that architecture students are entering upon graduation, how do educators better prepare them in the learning environment? Architecture schools are keen to discuss ‘alternative practices’ – bespoke, craft-led, small architecture enterprises (often represented by members of the faculty who finance said enterprises through teaching contracts), while pound for pound, the world is designed by architects who do not control the means of production. How can we give our students the tools to not only thrive, but also bring about the much-needed change to these practices and the profession at large?

This paper proposes that one of the ways that students can be better prepared is by being taught in school about the value systems placed upon architecture work, externally and internally. This begins in the architecture design studio, the context in which students learn how to work and ‘practice’ architecture, and where the value of their work – to themselves, their tutors and the school’s licensing board – are taught. The conflict between work¹ and different forms of value within the profession – economic value, professional value and personal value – contribute to this ongoing crisis within the architecture profession. And while educational and professional revolution may be required, action must be taken today to turn the tide. This paper suggests practical ways that the architecture design studio teaching can be augmented to provide students with the skills to negotiate between the ‘personal and architectural value systems’ taught in schools and the ‘economic value system’ used by clients in the profession.

Architect’s work

In the *Ten Books of Architecture*, Vitruvius declared that the work of an architect was to create a structure that exhibited the qualities of *firmitas, utilitas, venustas* or ‘firmness, commodity and delight’. Thirteen centuries later, Leon Battista Alberti is credited for separating thinking from making in architecture practice, thus refashioning the architect as a designer who does mental work, and distinctly separate from the engineer and builder who do manual work. Both Vitruvius and Alberti’s images of the architect continue to define contemporary architecture practice, though the clear distinction between manual and mental work has lost its relevance as, similar to other professions, they both have expanded to encompass aspects of each other in everyday work. To embrace the wider breadth and depth of contemporary architecture work, Maurizio Lazzarato’s definition of ‘Immaterial Labor’ has been used as the starting point of recent scholarship from Peggy Deamer and The Architecture Lobby, who have sought to reframe the sociological analysis of the architect away from Bourdieu’s ‘Architect as Cultural Tastemaker’ to ‘Architect as Worker’ in order to take on the issue of professional marginality and subjectivity as a problem of work.

1 - Considering Arendt’s distinction between ‘work’ and ‘labor’ in *The Human Condition*, Kenneth Frampton described the architect in terms of Arendt’s *homo faber* who is engaged in both the process and product of his work and whose ambiguity is reflected in the ambiguity of architecture practice (Frampton, 2002). In this paper, I use work to mean what is done in everyday practice and labor to situate these actions within the economic context in which they exist.

The conflict between work and different forms of value within the profession – economic value, professional value and personal value – contribute to this ongoing crisis within the architecture profession.

Immaterial labor is important to understanding architectural work because, as Reyner Banham remarked, ‘...what distinguishes architecture is not what is done – since, on their good days, all the world and his wife can apparently do it better – but how it is done’.

Lazzarato defines immaterial labor as ‘the labor that produces the informational and cultural content of the commodity’ (Lazzarato, 1996: 133). Immaterial labor encompasses different activities that are not traditionally considered work – such as “defining and fixing cultural and artistic standards, fashions, tastes, consumer norms, and, more strategically, public opinion” (Lazzarato, 1996: 133) – and blurs the distinction between manual and mental labor, incorporating other skills such as intellectual and entrepreneurial skills into the definition of work. Immaterial labor is important to understanding architectural work because, as Reyner Banham remarked, ‘...what distinguishes architecture is not *what* is done – since, on their good days, all the world and his wife can apparently do it better – but *how* it is done’ (Banham, 1990: 294). Immaterial labor blurs the division and contents of labor by incorporating the client/consumer into the production and creative process, which becomes about social relationships and communications rather than pure commodity production. As a contingent practice, architecture work is done and redone in a dynamic manner over the course of the project in collaboration with a rotating series of consultants, subconsultants and public entities. As the building industry has grown, the shifting of other professions have significantly impacted what architects have jurisdiction over today such that ‘... in fact the architect often becomes a broker negotiating a general design through a maze dictated by others’ (Abbott, 1988: 50). With increased complexity of building systems and development methods, interprofessional competition between building professionals has taken its toll on the architect’s duties as architects continue to try to negotiate their eroding role in the space between the technical and poetic, subjective and objective knowledge. This interprofessional competition from new professions emerging around architecture, ‘have reduced the profession’s connection with building even further, as Robert Gutman warns (Gutman, 1988: 45), turning the architect into a design subcontractor, whose decision are limited to aesthetic arbitration’ (Crawford, 1991: 42). In losing influence over building, engineering, and planning to other professions, the role of the architect has been tailored so that now it is only responsible for *venustas* (‘delight’), the only

quality that has not been claimed by other building professions (Crawford, 1991).

Dynamic changes in building technology and global capital in the last forty years have led to the further marginalization of the architecture profession as the profession has failed to adapt with the new economic, social and political context in which it works (Crawford, 1991). Of the many changes, a few – the rise of speculative development and design build contracts, the abolishment of fee scales, rise of digital technologies – have had massive impacts on the nature of architecture work, altering the type of clients, fees, contracts, liabilities, workflow and hierarchies in offices. This will continue to accelerate as BIM becomes the norm for project delivery for all private and public clients and automation continues to decouple value from work across all fields. Despite these massive changes in the nature of architecture practice and work, architecture education has not changed at the same rate, leaving students wholly unprepared for the labor environment that they enter upon graduation. Given the complexities of types of work and the inability to easily separate them from each other, defining the value prescribed to an architect's work can be difficult as value changes throughout a project. Architecture is both a process and a product, and the word 'architecture' is used to mean both of these things. While the economic valorization of architecture by architect and client tends to focus on the built product and is clearly identified in a contract, the personal, social and ethical values that the architect places on her work covers both architecture as a product and as a process. As such, in architecture work the use value and exchange value distinction set by Marx is not particularly helpful since the building that is created by architecture labor is both used and exchanged for capital. Below is an attempt to interrogate three different value systems applied to the work described above.

Economic Value

'The value of the product is not what it costs to provide or produce, it is the value the customer puts on it.'

RIBA 'Fee Calculation, Management and Negotiation for Architects', 2013

While the economic valorization of architecture by architect and client tends to focus on the built product and is clearly identified in a contract, the personal, social and ethical values that the architect places on her work covers both architecture as a product and as a process.

Compensating work based on the material value of a finished product also does not take into consideration quality or expertise of work done by one architect over another and expects the architect to take on more risk.

When compared to other professions, architects fees have been found to be fundamentally too low.

The direct indication of how the architectural product is valued by the clients is the fee billed to the client, which is most commonly calculated as a percentage of the total building cost. This was established as standard business practice to set the architect apart as an 'elite creative' professional, separate from members of the building trades and to establish the unique services that the architect would provide for their client (Kubany, Linn, 1999). Consistent across all sectors and contract types, as the cost of construction increases, the percent fee charged decreases (Mizra, Nancy, 2014). While this is an easy way for the client and the architect to assign a fee to a project, this payment structure does not take into consideration the amount of variation in work required for a project type (Tombesi, 2015) (Mizra, Nacey, 2014). It also links architecture work directly to the building material costs and short term market forces out of the control of the architect, and creates a conflict of interest between the architect as the owner's agent who works (sometimes more hours) to keep the building cost low for the owner and the architect who would like to be well-compensated for her work. Compensating work based on the material value of a finished product also does not take into consideration quality or expertise of work done by one architect over another (Kubany, Linn, 1999) and expects the architect to take on more risk. In order to ask for an accurate fee, the architect is required to have a good idea of the complexity of the project and its context as well as market trends. By tying the economic value of the architect's work to the finished built product, work is only valued in relation to the short-term economic goals of the client – the leasing or selling of the building after completion – without incorporating the long-term economic or social value of the building.

The reality of this economic value system is not good for architects. When compared to other professions, architects fees have been found to be fundamentally too low (UK Office of Fair Trading, 2001), with some blaming this on the removal of the fee scale. Despite the standard benchmark percentage fee for architects widely considered to be 5%, a 2012 survey by UK magazine "Building Design" found that only 21% of architects surveyed received fees above 5% of total building cost, while 55% of architects received fee levels of

4% or less (Rogers, 2012). The economic illiteracy of the profession is evident in the fact that 60% of architecture practices do not have business plans and 39% of practices are not measuring the number of non-billable hours of work that they do (Colander Associates, 2014). On top of this deficit, the same report showed that 62% of UK architecture practices do speculative design work for clients for free – oftentimes to beat out other architects for a job in a kind of ‘race to the bottom’. This may be the only excuse for the fact that 82% of Architects regularly work overtime, with an average work week of 46 hours. (Mizra, Nacey, 2015). As the economic value applied to architect’s work does not allow room for the contingency that is inherent in it, some architecture practices make up the difference by undermining the economic value of the work of their employees. Some firms do not pay their interns (Note: it wasn’t until 2011 that RIBA changed their charter to require that student placements are paid at least minimum wage (Dezeen, 2011)) and many do not pay overtime – both scenarios exploiting their employees in order to make the business profitable. Even for those who do pay, wages for year out students between Part 1 and Part 2 have stagnated, increasing only 2.5% between 2000 and 2013, after inflation, compared to partner salaries in non-solo practices increasing 11.5% (Mizra, Nacey, 2014). During this same period, the average cost of architecture education increased by as much as 240% (Fulcher, 2011). How do we educate young architects about the potential wage exploitation and the economic value challenges ahead? For one, we need to teach them the true value of their time. Time is the most valuable thing that architects have because it is tangibly finite. Architecture schools expect students to give their time freely and work more hours than any other degree (Howarth, 2017). The sheer volume of hours promotes the idea that ‘Architecture is not a career. It is a calling!’ (Deamer, 2015: 61) and teaches students that their time is expendable and relatively worthless, a belief and work ethic that employers later exploit. To combat this trend, Peggy Deamer has her students at Yale University sign a contract at the beginning of the year stating that they will not do any ‘all-nighters’. Though enforced by the honor system, it sends the message to students that working through the night

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Creating an industry award that rewards good process not just outcomes is one way to educate recent graduates (and all architects) about which firms value their work while serving as a tool for responsible practices to recruit the best talent.

Architecture is determined by a specific, narrow and ‘secret’ value-system that privileges aesthetics and proper style and protocol over substance.

is not condoned, nor is it smart practice. In the spirit of promoting just labor practices in practice, The Architecture Lobby’s Just Design certification program collects information about the working conditions at US architecture firms and publicly awards firms with a certification of best labor practices. Creating an industry award that rewards good process not just outcomes is one way to educate recent graduates (and all architects) about which firms value their work while serving as a tool for responsible practices to recruit the best talent. This will hopefully continue to turn the tide on what students will expect their working conditions to be after graduation so that when they are asked, or expected, to consistently work late for no pay, they will have the ability to refuse. Architects will have the tools to say ‘no’ to their employers who are exploiting them by setting unachievable deadlines and promising the clients more than they can deliver for less than it costs.

Professional Value

To become an architect, like many other professions, is to learn the distinct language, attitude and culture that is taught in the ‘studios’ of architecture schools and replicated in the profession. Architecture is determined by a specific, narrow and ‘secret’ value-system that privileges aesthetics and proper style and protocol over substance (Banham, 1990). The tight control on the profession (i.e. the regulation of the title ‘Architect’) kept by bodies such as RIBA maintains the dominance of this culture and perpetuates its existence.

There are many aspects to the Architecture Value System and this discussion will reference only three. Firstly, an architect’s personal and professional reputation is above all built on creativity (Benedickt, 1999). Second is that architects are social changemakers and have an ethical responsibility to the greater public (Blau, 1984). Third is the strong history and theoretical framework within architecture that ties ethics to aesthetics (Till, 2009). These three narratives within the Architecture Value System culminated in the 1980s when the mainstream architecture profession disengaged from urban social issues, instead choosing to focus on form-making. While in recent years architecture’s professional organizations have updated their

code of ethics to promote agendas of sustainability, the RIBA and AIA Code of Ethics do not include any responsibility of the architect outside of those to the client, the professional body, and to upholding the law in general. And though this hasn't changed significantly, the architect's clients have. According to the 2009 RIBA Building Futures report, 50% of architects were employed by the public sector in the 1970s compared to today's figure of less than 9%. Today over 50% of the construction value of UK architects' workload is for contractor clients (RIBA, 2009a) and the majority of income generated by architects is from private clients. This shift from working for public clients with long term social and financial goals to speculative private developers that rely on impatient capital to build for market trends means that today's architects are being asked to do a fundamentally different type of work. This work is often times tailored to a proforma that doesn't value 'the public good', relying on the private monetization of the public realm and taking on a higher amount of risk. Despite this, the vast majority of architects are concerned with issues of social and economic justice and believe that architecture has a role in those issues (Crawford, 1991). This leaves architects hiding their ulterior motives of design excellence, social responsibility, design innovation & attention to the public realm from clients, often not billing them for hours that are worked.

Contracts aside, the truth is that all architecture, no matter the funding source, is an act of spatial and therefore social construction, which has ethical implications for society. As Jeremy Till states, 'A client may argue that they are not paying for an architect to address these broader ethics, and an architect may say that the whole idea of wider responsibilities smacks of idealism. But the point is that issues of social ethics are inherent in the design of any building, and just to ignore them does not mean that they will go away' (Till, 2009: 182).

There is no doubt that in order for the personal and social values that architects hold in their work to be incorporated into the design and be valued by clients and the public at large, the Architecture Value System has to be expanded to include a broader understanding of ethical and social responsibility. One way to approach this in studio is to teach students to incor-

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porate ethical as well as commercial issues into their work. The new contexts in which architects work ‘certainly demand new relationships and new methods, but even more importantly, updated ideals and ethics. Almost as dangerous as having no moral compass at all would be to attempt to cling to the wreckage of outmoded professional structures’ (Duffy, Rabaneck, 2013: 121).

As an anecdote, students in our undergraduate design studio at Oxford Brookes picked their own project sites in Marseille. A number of our students proposed building their private live/work studios in several public plazas in Marseille, effectively choosing to transfer public land to private ownership. Until we discussed in our studio desk crits the ethical and societal implications of what it means to privatize a piece of public land, none of them had any notion that this was a problem nor that land ownership mattered in a studio design project. My point is that if we do not introduce these issues during studio, when do students become aware of them and the role that architects play? Part of this is the fault of us as instructors for not briefing them better in site selection and part was the lack of imagination of some students to pick just any open space to build on. As instructors we needed to have done more earlier on to discuss these issues with every student and link what was being done in studio to what was being taught in history and theory about the importance of public space in society. In just this one example of ethical responsibility in the built environment, there are serious consequences for society if our students do not understand how architects are implicated in the stewardship of public space, how their actions affect the larger social and physical experience of place, not to mention the increasingly nuanced blurring of public and private land ownership and what that means for society.

In order to teach expanded ethics, we need to teach a more critical understanding of context in architecture that is not simply form based, but includes a sense of the global and local networks in which architects work and build. Architecture is a deeply social process and yet it is valued as an aesthetic pursuit, independent of the messy power structures inherent to it. Architectural form is seen both externally and internally as a reflection of the society that produced

it and architects must take a stand in regards to how their work affects themselves and others in society. One example of a practitioner doing this is South African Architect Jo Noero, who is committed to only taking projects that conform to the 1994 South African Bill of Rights. Given the lack of available housing and land closely connected to urban centers and the Bill of Rights declaration that all South Africans deserve a decent home, Noero has set both minimum and maximum standards for the size of home that he will design for clients – whether it is social housing for the poor or luxury housing for the wealthy. Minimum to improve the standard of living for the poor, maximum so that the wealthy few do not take more than their fair share at the expense of others (Noero, 2018). As architects, we can choose how we wish to practice and we can teach our students to engage with expanded definitions of ethical responsibility in to their work.

Personal Value

Finally, as with other creative professions, embedded within an architect's practice is the personal value of doing good work. In *The Craftsman*, Richard Sennett defines craftsmen as people who are engaged in practical work but 'are dedicated to good work for its own sake... their labor is not simply a means to another end' (Sennett, 2008: 20). It is this 'drive to do good work [that] can give people a sense of vocation' (Sennett, 2008: 267).

This desire to fulfill an individual purpose is particularly understandable in the context of a profession as contingent as architecture, one that requires a team to work together and make compromises. Despite a desire for individual agency through meaningful work, it is near impossible for the architect to exhibit self-expression in the finished product. The architect's personal value is ignored in the context of the capitalist system while the professional value system is purposefully designed to be opaque, unknown outside of the initiated and therefore misunderstood external to the architecture profession (Banham, 1990).

Lazarato identifies this involvement of the personal in work as a key characteristic of immaterial labor, which requires its subjects to be active participants of a team. Instead of simply disregarding the Taylorist hierarchy of subject and command through the blur-

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The worker (subject) becomes responsible for managing his own work and subjectivity through his drive for personal agency and desire to do good work.

Ingel's valorization of creative work being beyond standard labor practices – hours as well as pay – and the endorsement of architectural work as the source of personal meaning is at best naïve and at worst manipulative.

ring of work responsibilities and active participation, immaterial labor relies on a management that 'threatens to be even more totalitarian than the earlier rigid divisions between mental and manual labor (ideas and execution), because capitalism seeks to involve even the worker's personality and subjectivity within the production of value' (Lazzarato, 1996: 136). The worker (subject) becomes responsible for managing his own work and subjectivity through his drive for personal agency and desire to do good work. This subjugation of the architect relies, in part, on the blurring of power structures within architecture firms so that total ownership and responsibility are felt at the bottom. In an interview with *Dezeen*, Architect Bjarke Ingels said that it was not realistic for his employees to follow the Danish 37 hour work week because architecture is a 'creative profession where you are designing something ... and where there's deadlines, and where it's not a function that you're fulfilling but you're taking something that doesn't exist, and you're making it exist there those rules don't apply. So that's the price you pay but the reward you get it that you do something incredibly meaningful if you actually love what you are doing and you're doing meaningful work' (Mairs, 2017: § 33). Ingel's valorization of creative work being beyond standard labor practices – hours as well as pay – and the endorsement of architectural work as the source of personal meaning is at best naïve and at worst manipulative. Deadlines are not preordained, they are set by management and the architect-client contract. Within that contract, every hour worked is financially compensated at the negotiated price to someone – though often not to the overworked intern.

The rest of the Ingels interview frames another important component of the inherent power structures in architecture: the identity of the profession as a heterosexual white male discipline. Unfortunately, there is not space in this essay to do the topic justice, but it is worth noting that the statistics are stark. In 2014, 92% of UK architects identified as white and 79% as male (Mizra, Nacey, 2015) and in 2017, of the biggest 100 architecture firms in the world, only 3 were led by women and only 10% had women in the highest ranking jobs – even fewer in design roles at that level (Fairs, 2017). While gender of incoming stu-

dents to architecture school has been roughly even for generations, the number of women completing Part 1 was 41%, while only 13% of women are partners or directors in architecture firms (Colander Associates, 2014). This drop off is now evident during school, with the 2017 Ethel Day Study showing that prior to starting their course, 85% of female students and 88% of male students said that they planned to become licensed architects. After the course had started, that number dropped to 63% of women and 79% of men (Braidwood, 2017). In the same study, 47.7% of female students reported experiencing some kind of gender discrimination in school – putting gender discrimination above race, religion or sexuality discrimination. For the profession to be able to adapt and change to current and future challenges, it needs to be generating greater diversity of thought faster. This requires a greater diversity of architects – most importantly, minorities, women and those from lower socio-economic backgrounds – in firms, in schools and, more importantly, leading both architecture firms and schools. We are doing the women and men we teach a great disservice by ignoring not only the subject of work in our teaching, but more importantly the value of diversity of experience and thought and the power structures inherent to practice.

One way to increase the amount of diverse representation in schools is by committing to hiring a diverse group of tutors, lecturers and invited critics and presenting case studies from diverse practices. In response to the lack of women speaking on panels and in studio design crits, Parlour in Australia started Marion's List, a public register of women in Australian architecture and the built environments, as a reference for those looking for experts to sit on juries, give public talks or teach. In an effort to raise awareness at institutions, Jeremy Till, Dean of Central St. Martin's, has committed to only speaking at events where at least 30% of the presenters are women (Till, 2011). We know that representation matters and yet, in my experience, of the 10 Brooks Year 2 Tech precedent case studies chosen by studio leaders in 2016, only 1 of them was by a firm headed by a solo woman architect – 9/10 Stock Orchard Street by Sarah Wigglesworth Architects (though a half point could be given for Diller+Scofidio's Blur Building). It is worth

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RIBA has launched campaigns that promote the idea that the hope for the architecture profession relies on the better articulation of architecture's value for clients and society, as defined by the client's definition of economic value.

The definition of value must be expanded to include the professional value systems that are taught in schools of architecture and reinforced in practice, and the personal values held by architects.

noting that on their submitted reports, almost half of the students labeled the architect as 'Sarah Wigglesworth and Jeremy Till', one just 'Jeremy Till'.

Teaching value

'[a]ll architecture is social architecture. All architecture is political architecture.'

Paul Jones, *The Sociology of Architecture*

The decline of the status of professionals to that of traditional working class definitions (Braverman, 1974) and the increase in (indebted) highly educated yet economically precarious workers not just in architecture but globally has forced professional organizations to respond. RIBA has launched campaigns that promote the idea that the hope for the architecture profession relies on the better articulation of architecture's value for clients and society, as defined by the client's definition of economic value (RIBA, 2015) (Warpole, 2000). RIBA presents the economic value of architecture mainly in terms of technical building solutions that are often not the sole responsibility of the architect and neglect the day-to-day immaterial labor and creative work that the architect does. To truly understand the value of architecture work – perceived externally by the client as well as internally by the profession and individuals doing the work – the definition of value must be expanded to include the professional value systems that are taught in schools of architecture and reinforced in practice, and the personal values held by architects.

If the current 'Architect as Worker' movement is not outright dismissed as a threat to the internally defined 'elite' status of architecture, it can be embraced as an empowering challenge to the profession to take care of its own as a first step to taking care of others. The majority of architects are, to use the language of The Architecture Lobby, precarious workers, and yet we are generally expected (by ourselves, by the public) to be the vanguards of the communities and environments in which we work. Architects are implicated in the social and spatial injustices of the built environment, though to quote Iris Marion Young, it is 'not my job' to be responsible for fighting injustice – it is the job of the state (Young, 2011). When more architects worked for public agencies, their ethical responsibil-

ities were ours by association, making it unnecessary to expand the architecture professions code of ethics. Today, this is a problem in cash-strapped, deregulating, devolving and privatizing cities, states, counties and countries around the world. These are the governing bodies that are expected to restrict our private developer clients looking for their 20% profit, to force them to provide social housing, good urban spaces, use sustainable and safe materials, all while freeing architects up to act as pure agents and extensions of our client's (private) interests. And they cannot cope. This dynamic will continue to be further complicated by the changing nature of work. As automation continues to decouple value from work across professions and workplaces around the world, in some ways, the architecture profession is already ahead of the curve. Value has already been decoupled from work. Architects have already not taken ethical responsibility for their actions, even before the machines and algorithms with which they work excused them from this responsibility. If it is our responsibility as citizens to fit against injustice, could we also take responsibility as professionals who are perpetrating injustice in our work?

Because the architecture profession is ahead of the times and we have seen what this leads to, I believe there is real opportunity to rethink what our professional value systems could be. Ultimately, in order for architects to thrive in a posthuman world of automated work, the profession needs to embrace a practice embedded in humanist values. The value prescribed to architecture work cannot be from a purely capitalist system. But this change will need to come from architecture schools, the place where students first learn how to work. It is our duty to teach students the value of their work – current and future potentials – and to promote alternative practices and modes of working that can become mainstream. By expanding our value systems – in particular, our ethical value systems – the profession could be at the forefront of change to our internal and external work environments.

To conclude, in the 1984 preface to *Complexity and Contradiction in Architecture*, Venturi wrote: "The architect's ever diminishing power and his growing ineffectualness in shaping the whole environment can perhaps be reversed, ironically, by narrowing his

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Ultimately, in order for architects to thrive in a posthuman world of automated work, the profession needs to embrace a practice embedded in humanist values.

concerns and concentrating on his own job. Perhaps then relationships and power will take care of themselves” (Venturi, 1984: 14). It’s safe to say that has not happened. It is time to take a different approach.

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Economies of School-Building: the Selling of Architectural and Educational Futures

Adam Wood

Abstract

To access more capital, more quickly, governments seek new sources of finance to fund school-building including loans and Public Private Partnerships. The paper uses examples principally from England and Italy to argue that architecture is now central in this process through its selling of reductive, human resource-based educational futures. By colonizing imaginaries of tomorrow, school design therefore helps to secure the legitimacy of new financial demands, creating a virtuous circle (at least for financial purposes). However, with education moved beyond current experience, the present and the space it offers for contestation is deleted and only architectural-educational futures already part-defined by a technical élite are offered in its place. New forms and extents of financial and architectural tie-in energise the rate at which people can be excluded from the production of their own futures.

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Introduction

Governments' desires to stand out as bold investors in innovative futures (and remembered as such) have exacerbated genuine needs for investment in school buildings and fuelled demands to bring forward capital from the future. Consequently, public investment in schools is often routed through Public Private Partnerships (PPPs) such as Private Finance Initiatives (PFIs) as in England or specially negotiated loans in Italy (European Investment Bank, 2016). In this way, imagined educational futures can be financed now and so imported into the present: we get tomorrow's schools today albeit without the opportunity for public discussion of what and who today involves. The present (and its inhabitants) are effectively deleted. This paper argues that the mortgaging of school construction and new financing structures give oxygen to the development of fantasy worlds of 21st century learning which tend to interpret students as future resources of human capital. As a consequence, the architectural imaginations materialised in new schools tend towards technicist fetishizations encouraging education to be reframed from a public good into a commodity of learning that can be bought on credit in return for expected gains in learning and, especially in England, healthy leasing payments to the construction-cum-finance industry.

The overall aim of the paper is to explore how financing and edu-architectural design interact, are managed in both economic and discursive terms and go on to affect how education and the users of school buildings come to be seen. England is the principal focus. However, I also bring the initial findings of current research on school-building in Italy into the discussion in order to sound a cautionary note since some developments there appear to mirror mechanisms in England that relied on and reproduced particularly dramatic visions of architectural and educational futures. Indeed, new funds for school-building (whether deriving from PFI or from European loans) are more international than traditional monies leveraged through national taxation or deficit financing. Reciprocally, the visions of education and architecture that are promoted derive increasingly from actors beyond any given nation-state (the OECD being just one example) and so I also point to similar processes elsewhere

to indicate how the English and Italian cases are part of broader trends.

In Section 2 I show how education is shifting towards learning where learning is simultaneously framed in human capital terms, and quantified and *understood* as quantifiable. This first step allows me to relate an economy of learning to the changing nature of funding of school construction and the effects of that, in the main body of the paper, Section 3. In the conclusion, Section 4, I argue that the ways in which we are encouraged to conceive of schools and architecture are not inevitable and suggest some alternatives.

Entwining Economies of Learning and School-Building

Education is increasingly framed as (and reduced to) those processes which can lead to quantifiable outputs of *learning*. This re-framing is supported by the work of supranational organisations such as the Organisation for Economic Co-operation and Development (OECD) whose messaging and policy tools, Sotiria Grek argues, connect ‘learning directly to labor market outcomes and human capital’ (2014: 274).

In Italy, education has been hailed as the ‘only true weapon to remain afloat in the markets. Today it is impossible to not recognise that this is the ingredient most correlated to growth’ (De Carli, 2017). Such functional logic reappears in the justifications for the European Investment Bank’s loan of Euro 1 Billion for financing Italian school-building and improvements where the objective is: ‘Improving the learning environment for students and working conditions for teachers reinforces the formation of human capital.’ (2015). General, international trends in education and finance therefore become instantiated locally through the provision of rationales for (and the resulting, concrete instances of) new or improved schools.

In parallel, measurement and evaluation have become tools of educational control. The head of the OECD’s PISA (Programme for International Student Assessment) notes in an interview that, ‘If we want to bring it on the radar screen, we need to measure it’ (Anderson, 2016). Such beliefs, put into action by powerful, well-resourced players, help to reframe both what is educationally important and what education is, a process supported by changes in the framing of educational concepts where new vocabularies

The ways in which we are encouraged to conceive of schools and architecture are not inevitable.

International trends in education and finance become instantiated locally through the provision of rationales for (and the resulting, concrete instances of) new or improved schools.

1 - See, for example, the recent Istituto Nazionale di Documentazione, Innovazione e Ricerca Educativa (Indire, part of the Ministry of Education) publication *Dall'Aula all'Ambiente di Apprendimento* (2017) [From Classroom to Learning Environment]. Note also that this shift 'Da ... a...' ('From ... to...') is simultaneously temporal, spatial and discursive, entwining conceptual change to time and space as progression and education and design as always-forward-moving phenomena in the service of functional return. I return to this still-undead modernism in Section 3.3.

Actors in the education services industry invest in the discursive representation of themselves as saleable and consumable *things* and this now includes the sale of architecture as the value-added learning experience.

represent 'a particular technologization or instrumentalization of education' (Friesen, 2013: 21). For example, this process is reflected linguistically and spatially in the tendency to replace *classrooms* (spaces named after the social group possessing or being formed by them) with *learning spaces* (a prescriptive, functional, de-socialized label of hoped-for activity), a trend paralleled in Italian¹ and other languages too. This is a process that Gert Biesta, with a 'deliberately ugly phrase', names 'learnification': the 'translation of everything there is to say about education in terms of learning and learners' (2009: 38).

In some respects, these *learnified* forms of education and financialized motives for school-building are not new: they mark a process that Lyotard identified as speeding up from the 1950s onwards:

It [knowledge] can fit into the new channels, and become operational, only if learning is translated into quantities of information [...] Knowledge is and will be produced in order to be sold, it is and will be consumed in order to be valorized in a new production: in both cases, the goal is exchange. (1984: 4)

What is new are the means for achieving it. Stephen Ball argues that in England, private entities are forming an 'education services industry' (2007: 39) and have developed to the extent that:

The private sector is now embedded in the heart and sinews of state education services at all levels, intertwined in the day-to-day business of decision-making, infrastructural development, capacity building and services delivery. (Ibid.: 41)

Actors in the education services industry invest in the discursive representation of themselves as saleable and consumable *things* and this now includes the sale of architecture as the value-added learning experience – a role we can see in the launch of the #GREAT-SCHOOLS thinktank in *The Architects' Journal*:

As schools behave more like private businesses they will be in competition with one another to attract the best teachers and students. Architects can draw on their experience in the private sector to help them achieve this. (2015)

Financial and political economies contribute to turning the public goods of education over to pri-

vate hands and architecture's role in this process is to effectively materialise and marketize education-as-product (on one hand) and diffuse images that represent the design of space as a site of comparative advantage in the educational marketplace on the other. The following section discusses new forms of financing and particularly their integration into political economy, their influence on architecture and ultimately their role in positioning an imagined 'user' in the future, beyond the awkward realities of the present.

The Return and Financialized Reinforcement of Future-Reaching

Building new schools and diffusing knowledge about them support both education directly and the propagation of its political and economic imaginary. The perceived urgency of these activities, the crises that would result from *not* taking educational and school-building action, and an orientation towards an inevitably better future that could be constructed are ideas with long histories, gaining ground throughout the 19th century (see Burke, Grosvenor, 2008: 26ff; Katz, 1987: 16ff). The early 20th century was the high-water mark for these ideas, the point when society 'became an object that the state might manage and transform with a view toward perfecting it' (Scott, 1998: 92). Since then, educational and architectural alternatives have been (briefly) allowed and even encouraged in some countries. Arnulf Lüchinger, for example, thought Hertzberger and others labelled as Dutch structuralists interesting precisely because they offered a counterpoint to the "reaching into the future" mentality' (1981: 15).

It is in this context that the following section explores a financialized return to and reinforcement of what I will call, after Lüchinger, 'future-reaching' in a compact between architecture and education, and its consequences. New financial instruments of school-building and architecture such as Private Finance Initiatives (hereafter PFI) and new kinds of loans make future-reaching not only possible once more but a moral imperative that has serious epistemological implications because of the way in which it deletes the very people it attempts to project forward. Hence, I explore how the availability of

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new financial instruments also has a feedback effect: funds imported from the future feed back into the production of what the economic sociologist Jens Beckert calls 'fictional expectations'. These are 'the images actors form as they consider future states of the world, the way they visualize causal relations, and the ways they perceive their actions influencing outcomes' (2016: 9). The imaginaries that actors develop and (to some extent) share are integral to capitalism since the 'contingency of expectations is also a source of *innovation* in the economy, giving rise to new ideas *despite* – or, even better, *because of* – uncertainty' (original emphases, *ibid.*: 10). This helps to understand the promulgation of *certain* architectural and educational futures (often made by more powerful agents) and how they relate to the economy because the control and diffusion of imaginaries by a technical élite (though control of particular funding mechanisms and school-building policy) can exclude others and their imaginaries: a way to colonize the future through the promotion of partial and ahistoric visions of it.

New financial and discursive instruments of school-building

Probably the best known of these new financial tools is PFI although Italy, for example, has negotiated special loans from the European Investment Bank allowing it to borrow outside of limits on its (very high) public debt (2016). Whether via PFI or specially negotiated loans, what legitimates these demands for more money (and that in turn feeds back to consolidate attention on the future) is the orientation towards the fictional expectations of particular imagined futures that Beckert discusses.

PFI has become a key financial instrument used to fund school-building in England but also in Scotland and New Zealand. It is a form of public-private partnership, in essence a mortgage taken out by the state with a private lender (and constructor) who provides capital up front to build a school and then receives that capital back over the course of 25-30 years, with interest. Providing liquidity is in the interests therefore of the government who gets a school (and recognition) more quickly than if only current spending budgets were available.

But PFI is also convenient for the lender-constructor: their own mobilisation of capital enables them to build (or at least outsource building) and so be economically active. Their income flow is now smoother with respect to traditional contracts and – key for their operation as financial vehicles – more predictable and (in theory, if well-managed) more reliable too, making them attractive to investors in the pension markets (BBC, 2016). Further income results from schools being tied into maintenance contracts with the same lender-constructor. Such relationships can be problematic for schools with some in England closing because of their inability to meet PFI payments (Dickens, 2017). In a further twist to the financialization of education and school-building, many PFI projects in Scotland were managed by offshore companies (ibid.) indicating a leakage of monies outside of the system that will be responsible for servicing repayment.

Exploring the use of PFI provides an insight into an accelerated hunger to have tomorrow, today, part of ‘a policy that seems to enjoin us to “live now, pay later”, a principle that ... underpins BSF [England’s Building Schools for the Future programme]’ (Mahony et al., 2011: 343). More broadly, the logic of wanting tomorrow, today fits with a mechanistic approach to school-building:

In Britain’s [sic] now deceased Building Schools for the Future programme, the idea of a school was a function not of any philosophy of education but of supply chain efficiencies as administered by global contractors: the mechanism of building a school was the focus. (Jacob, 2015)

The public investment enabled by PFI (or indeed loans in the case of Italian school-building) could be seen as fairly standard Keynesian policy. This may well be a mistake, however. Parker and Cahill’s analysis of Australia’s Building the Education Revolution (hereafter BER) shows how it

...relied upon archetypal neoliberal policy tools of outsourcing to the private sector, and in the most populous states of Victoria and NSW the BER was used to pioneer new levels of private sector involvement in public works. (2017: 263)

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Moreover, such moves of financing new forms of governance and public service delivery risk encouraging reliance on the private sector since such ‘innovative’ forms of crisis-management result from *and* contribute further to ‘a degree of path dependence and institutional lock-in of neoliberalism’ (ibid.: 266). Clearly, a degree of cautiousness in generalising from the Australian experience would be wise. And yet, a statement on England’s BSF from The House of Commons Education and Skills Committee noted that at the beginning of the programme, there were ‘very few architects, procurement experts or Principals in the system with experience to build on’ (2007: 12). The scale and novelty of BSF also indicates the extent to which neoliberal economic policies can gain ground through the *apparently* state-led focus on school-building: the path dependence mentioned above illustrates how reliance on consultants increases as state resources are depleted and knowledge becomes privatised. In architectural terms this pattern holds as well, with only Hampshire remaining as a significant county-level designer of schools in England. This is part of a broader trend: ‘In 1976, 49 per cent of all architects in the UK worked for the public sector. Today it is 0.9 per cent, and only 0.2 per cent in London’ (Williams, 2017: 55).

England’s enormous BSF programme was cancelled in 2010. However, a reading based on the concepts of path dependence and institutional lock-in would question whether – in governance terms at least – the cancellation was really the abrupt break it seemed to signal. The attention-grabbing curse of architectural excess by the then Secretary of State for Education, Michael Gove, took the headlines with his populist-appealing ‘no-one in this room is here to make architects richer’ (Fulcher, 2011). An effective straw man, the noise generated helped to hide the continuities of a quickening transition to a financialised private-sector management of public assets and policy instruments including school-building. BSF was killed but vast school-building contractors-cum-outsourcing agencies such as Carillion lived on (at least as long as future expectations of income could offset current expenditure). In the end, Carillion died too along with many of the contractors it owed money indicating the fragility of futures built on credit in environments where the

combination of poor management, squeezed margins and government-offloaded risk made for unsustainably weak cash flows. The Secretary of State killed one conception of the future, putting at risk the discursive foundations of the project as a whole since '[f]rom the investor's perspective, the value of investing in an innovative activity depends entirely on the perceived credibility of the envisioned future present' (Beckert, 2016: 186).

PFI is only the most exaggerated form of this enhanced capability to import capital from the future. Italy, for example, has loans from the European Investment Bank and grants from private and religious institutions to fund school-building and the discursive construction of employment-linked, innovative schooling. The former signals the produced unavailability of funds in the present – Italy's public debt is the highest in the EU after Greece (Eurostat, 2016).

Demanding the Future Now and Consequences

Where educational financing *for* the future is now seen by governments less as a moral or social commitment and instead as an investment in human resources, education and school-building become predicated on returns being devolved *in* the future. Attention easily shifts away from the present to a deferred and depopulated, distant time. In England, BSF was part of a broader pattern, a performative step over the present and into the future where its academy schools:

literally stand for and represent, in their buildings and infrastructure, new, bold and different thinking – more of the dynamic rhetoric of New Labour ... As texts the Academy buildings are enactments of a new 'imaginary' economy. (Ball, 2007: 172)

These imaginaries and fictional expectations should not be discarded as insignificant word play. Beckert's point is that such visions of the future can come to be causally efficacious, to 'have real consequences because dominant discourses affect the distribution of resources' (2016: 185). But further, they also affect the *mode* in which resources are distributed. Hence, in addition to making finance available from the future, more radical means of achieving buildings are stim-

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In addition to making finance available from the future, more radical means of achieving buildings are stimulated through the encouragement to move harder, faster and more thoroughly into the future.

The end result is that knowledge about buildings and their users is made more difficult to access.

The *now* is a space of real people available to consider their immediate and future needs in terms that accord with their own values yet school-building in both style and form has recently tended to overreach this present in search of more fertile (financially) but also less accountable futures.

ulated through the encouragement to move harder, faster and more thoroughly into the future:

BSF investment ... is about step change, innovation, stretch goals, challenging orthodoxies, and will potentially involve radical shifts from current practice. (Partnerships for Schools, 2009: 5)

A consequence of this sleight of temporal organisation and shift in values from the moral and social to the financial is the obscuring of the user through the financial instruments adopted. This happens in two ways. First, design-wise because 'the machinery of PFI meant that teachers and governors had limited contact with the people designing their buildings' (Moore, 2012: 229; see also CABE, 2007: 44). Second, in terms of learning about buildings in use since, as Leaman, Stevenson, and Bordass (2010: 576) argue Post-Occupancy Evaluation is made harder through PFI: knowledge is effectively privatised within the various fragments of the procurement chain where it is either silo-ed or becomes withheld as part of a firm's comparative advantage. Either way, the end result is that knowledge about buildings and their users is made more difficult to access, is shared less and so is increasingly denied to future designers who might seek to shape new schools using the results of empirical enquiry and (to the extent it is possible) the interests, values and experiences of users, even of other buildings.

However, 'step change', 'challenging orthodoxies' and 'radical shifts' are also dangerous for education itself – especially when the people who are subjected to those changes are excluded from decisions about how it happens. Further, as bell hooks writes of education, being radical can mean needing to avoid precisely the kind of step change that future-reaching encourages since 'our visions for tomorrow are most vital when they emerge from the concrete circumstances of change we are experiencing right now' (2003: 12). The *now* is a space of real people available to consider their immediate and future needs in terms that accord with their own values yet school-building in both style and form has recently tended to overreach this present in search of more fertile (financially) but also less accountable futures.

So far, this paper has focused mostly on England yet these discourses are international and internationalizing. The OECD has been one of the players helping to nudge countries towards a future focus via the mechanism of ‘mutual surveillance’ (OECD, n.d.: online) and publishing documents such as *21st Century Learning Environments*. Here the OECD invites countries to shift their focus not simply on to but *into* the future: ‘How can design transform existing facilities to achieve future educational goals?’ (OECD, 2006: 11). Not current goals but *future* ones are what counts. Here, a further deferral of interest and knowledge production takes place in a more uncertain time and space, reinforced by the reciprocal surveillance posed in questions such as ‘Are governments investing in new educational facilities for the 21st century?’ (ibid.). Hence, as well as distancing users from design, a too strong focus on the future risks an additional epistemological disjuncture. Not only are future users unavailable for comment or participation, their space of imagination and possibility is at one more remove.

This problem has been explored in depth by Doreen Massey whose work has focussed on concepts of space including their implications for how we think about time. In much of the discourse of school-building programmes and their financial stimuli there lies the still-undead sense of modernist progress, a vision that the future can be written now with enough forethought (and money). Space – seen as the enclosure of people rather than the result of their activities and social lives – is aligned to a temporal plan, one that simply needs to be unfurled by the technicians best positioned to elaborate it:

In these conceptions of singular progress (of whatever hue), temporality itself is not really open. The future is already foretold; inscribed into the story. (Massey, 2005: 68)

If the story is already part-written, then the space for people to choose, make and control their own futures is limited.

There is, then, a constellation of interests that positions ideas of school design in the ever-distant future. It is, simultaneously, epistemological, financial, spatial, aesthetic, involving professionals and their educational and architectural imaginaries, national

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governments and supra-national bodies all celebrating what and who we do not have at the expense of what and who we do. The editorial director of both “The Architectural Review” and “The Architects’ Journal”, Paul Finch, says boldly and approvingly that ‘All architecture is about the future’ (2015:online). But there’s the rub. People in schools will have to live in a present that is partly shaped by other parties’ thinking of the future and their relatively greater power at materialising it. Schools and school systems are forever pushed forwards in part by ‘the role of fear, and particularly the fear of being behind and the fear of being left behind’ (Biesta, 2015: 351). And, in a parallel to bell hooks’ comments on education practice, cited above, Keri Facer has critiqued the production of knowledge and discourse within education *research*, it too being responsible for generating future-reaching visions: ‘education research needs to ... find ways to mobilise *the present* as a resource of powerful contingency and possibility’ (original emphasis, 2013: 142). This is therefore a genuinely self-reinforcing constellation of fields crossing education, architecture, finance and supporting the logic of selling partly-made futures.

The mission to move the attentions of educational research and practice to the present could be helped by a humbler, less heroic approach to school-building. Instead of attempting to make itself commercially useful by invoking desires unlikely to be realisable by their users, architecture could support the work of teachers and students in the presents they want to make now where the ‘challenge [of building good schools] is simplified by giving up the attempt to predict the future’ (Woolner et al., 2005: 38). However, such a move would require that the drivers encouraging edu-architectural future-reaching be neutralised. The following section identifies some of these and their tendencies to colonize futures that might otherwise be more open in the present.

Rejecting the Past, and Crisis as a Stimulus for Future-Reaching

Much contemporary discussion of education and school architecture dismisses the past as a discontinuous, burdensome collection of redundant experiences. In this logic, the past is not a resource but a weight

dragging the capacities of human resource development backwards. In form, this appears similar to the high modernism of a century ago which James C. Scott critiqued for its treatment of the past as ‘an impediment, a history that must be transcended’ (1998: 95). More structurally, however, this new future-reaching is different: the state has off-loaded risk and the production of new futures onto private bodies or supra-national organisations such as the OECD have moved in to claim and sell their own visions. The past is therefore still valuable but only because it serves as a usefully dysfunctional *other* against which innovation and ‘radical shifts from current practice’ can be offered as solutions. The substantial content of the past is evacuated. As one educator working on the Citizen School Project in Porto Alegre, Brazil noted at a recent conference on educational futures, ‘Neoliberalism obliterates the past’ (Gandin, 2017). This obliteration carries risks. Mary and David Medd, for example, whose work on schools in a Department of Education in-house team where action research enabled both ‘continuity of experience and economies of scale’ (Franklin et al., 2012: 397) pointed out the potential effects in an as yet unpublished collection of notes on school design revisiting their educational aims through architecture. These were:

...to design not for an unidentified future, but for the present. Designing for the present doesn’t mean designing for yesterday, but for what percipient people can now identify as the growing points – i.e. the way forward – this is evolution ... This is nothing to do with designing for the Future ... Designing for the unknown means designing for nothing. (2009: 43)

However, such are the political and financial gains from reaching into the future to finance solutions that seem to deal with the present’s perceived problems, that school-building moves forward by narrating its own historiography, dragging architecture with it. So, in their *Consultation on a new approach to capital investment*, the Department for Education and Skills wrote that ‘The extra money now available [through PFI] presents a historic opportunity’ (2003: 4). These new schools were not, in a sense, for today’s students

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School-building moves forward by narrating its own historiography, dragging architecture with it.

The promotion of an urgent need to move to the future by turning away from the past confirms the existence of a crisis, with both material and discursive foundations.

Crises (real, exaggerated or invented) can be shaped discursively to provide backing for particular forms of innovation.

but for imagined future ones, and designed with a proper ‘visible inheritance’ (ibid.) that only architecture *and* private finance could achieve: the state was no longer *enough*.

The promotion of an urgent need to move to the future by turning away from the past confirms the existence of a crisis, with both material and discursive foundations. In Italy, for example, the inadequacy of many schools’ resistance to earthquakes is cause for genuine concern. But such inadequacy is always the result of political choices, of decisions not to have invested previously, to have spent money elsewhere and to continue to do so. One outcome is what has been called an ‘*emergenza scuola*’ because of the ‘degradation deriving from years of immobile resources’ (Gallo, 2011: xviii) and a ‘vacuum in terms of political, administrative and financial planning’ (ibid.: xx). Much of the discursive messaging of BSF and this Italian example evidence the existence of what Dana Cuff calls architecture’s ‘crisis mentality’ (2012: 390), where:

a dire state of affairs is variously attributed to the economy, stylistic confusion, a lack of creativity, poor construction, the state of education, and so on. This professional anxiety can serve as a call to action that intellectuals and practitioners produce and listeners grasp. A convincingly significant message of catastrophe demands collective response. The digital revolution, the surveillance city, the World Trade Center site, the Katrina-ravaged Gulf Coast, global warming – each has been variously construed as a crisis that requires architectural remediation ... Disaster scenarios hold the potential for innovation: the old ways have not worked, so new solutions are necessary. (Ibid.)

Hence crises (real, exaggerated or invented) can be shaped discursively to provide backing for particular forms of innovation – architectural, financial and political where the state is seen as being unable to resolve problems and where market-based solutions then appear as both necessary and more natural.

Conclusion and Tentative Alternatives

The purpose of this section is to draw together the threads in the above discussion and, in doing so, suggest alternatives.

I have shown that new methods of funding school-building have grown in place of exhausted (or rejected) opportunities for growth in the present. Here, capital – aided by architecture and narratives of educational crisis in the 21st century – has helped to colonize possible futures-in-the-present, deferring the state's obligations, reducing its risk but also distancing users from the present as both objects of knowledge and as subjects with a *range* of presents available to them. Control over which futures are available is therefore rationed since those in possession of discursive tools to manage its production and the political capital to make certain representations more likely can begin to define futures before others have a chance: 'Competition for resources for innovation is to a great extent a power struggle over the credibility of imaginary futures' (Beckert, 2016: 184). In turn, these struggles have real effects since they legitimate the provision of resources and the better resourced of these 'can thus prevent or marginalize alternative futures' (Beckert, 2016: 185).

However, implicit in the discussion of these problems are the means of their mitigation. Some – such as the direct problems with PFI and its tendency to obscure or privatise knowledge about the interests of the students and teachers using schools – have already been noted. Others – such as the need to focus more on the present – have been referenced through a range of commentators' works. But what would focussing more on the present mean in practice? What else, besides this broad injunction, is possible? Some suggestions follow.

One way forward is to challenge some of the basic premises on which school-building tends to happen. Are national school-building *programmes*, for example, the only means of building schools? They tend to build-in future scarcity of funding by providing capital in waves that is therefore no longer available in increments and/or that needs to be repaid with interest – a solution that prefigures the next crisis. They seem to reinforce centralised political control and are sometimes called on to serve purposes that are distracting from education and community-building. Instead, if funding were 'smoother' and devolved directly to smaller political units below the nation-state level (as they once were, in England and

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Because of their continuing role in designing the buildings where students spend so much time, this discussion should involve architects too.

Italy), enabling buildings to be extended as and when local needs determined, there may be more room for the present and the people who inhabit this time. One small-scale illustration of this can be seen in Berlin. Here, the Bonus-Programm grants schools which have 50 per cent or more of their students from low-income families extra funds to spend on school improvement in ways that they see fit. Once architecture practice, Bauereignis Sütterlin Wagner, works with these schools (and directly with the students) to improve the buildings, spaces and sometimes the external grounds. The school community's relative autonomy is interesting here from both an architectural and educational perspective but perhaps more importantly, in terms of the above discussion, the funding helps to retain spatial and educational imaginations in the present and closer to the teachers and students who use the spaces, a small but significant recognition of the fact that 'the real and most important designer of the school should be the collectivity which uses it' (De Carlo, 1969: 32).

The above example is a modest and local one but perhaps this is how and where discussion of any possible architectural assistance in supporting educational change should happen. If we accept that 'in democratic societies there should be an ongoing discussion about the purposes of education' (Biesta, 2009: 39) then there is a need for large and small-scale discussion with local needs and actual rather than abstracted people taking part in conversations about the range of educational futures that might be kept open. Because of their continuing role in designing the buildings where students spend so much time, this discussion should involve architects too. This means asking existential questions before queries about style, method or efficiency as Giancarlo De Carlo indicated:

we cannot deal with problems of 'how to' without first posing the problems of 'why'. If we were to begin discussing immediately the best way to build school buildings for contemporary society without first clarifying the reasons for which contemporary society needs school buildings, we would run the risk of taking for granted definitions and judgements which may not make sense any more; and our speculations would turn out to be sandcastles. (1969: 12)



Fig. 1 - Students of the Carl-Kraemer-Grundschule, Berlin at work transforming their classroom. Photo: ©Bauereignis.



Fig. 2 - Their finished classroom. Photo: ©Bauereignis.

Finally, therefore, it would pay to recognise that imagined futures do not need to be exclusionary. As well as beginning with including students, teachers and others who work in schools, we (and I write as an educationalist) would do well to resist the continued exclusion of architects from discussions about educational futures, how they are funded and they might be realized spatially. Debates about efficiency gains in education in the future are likely to continue emphasizing the role of online learning. With this, the importance of engaging more deeply with questions

of place and opportunities for being physically located with others suggests experts in educational *and* spatial organization are needed now.

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project

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L'intelligenza del progetto e l'architettura di carta-moneta

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Abstract

Moving from the two geometries identified by Michel Serres as peculiar of the history of Western thought – the first free of utility, being the demonstration of the desire for intellectual speculation, the second functional to the achievement of practical and economic purposes as well as subject to the rules of power – the paper investigates the contradictions between the different meanings of geometry and representation, exploring the relationship between the project, its developers and users in order to outline new perspectives on the design process and the market dynamics. The text is divided into three parts: the first concisely presents the concepts on which the project / market dialectic is based; the second explores the less transparent regions of this complex relationship; the third hopes for the overcoming of contradictions through the definition of new estimative processes, multidimensional and circular, to be opposed to those, linear and one-dimensional, of neoclassical theories.

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Le
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Ogni opera di
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di progettisti e
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L'architettura di carta-moneta: dieci osservazioni preliminari

Uno: Misure

Ogni giorno professionisti, che si sono laureati in architettura e ingegneria civile nelle varie università del mondo, prendono le misure di porzioni della superficie terrestre per trasformarle, interpretando le esigenze di committenti pubblici e privati. Le rappresentazioni geometriche contenute nei progetti diventano opere costruite solo se rispettano precisi requisiti di convenienza economica stabiliti da questi stessi committenti in termini di costo di costruzione, valore di mercato, rendita fondiaria.

Due: Denaro

Le operazioni che convertono queste geometrie in indicatori numerici elementari usano il denaro tra le unità di misura. Ne consegue che ogni opera di architettura può essere riferita a parametri monetari, indipendentemente dalla propria complessità o dalla rilevanza di progettisti e committenti. Questa osservazione vale tanto per la realizzazione del quartier generale di una multinazionale affidato al vincitore di un Premio Pritzker, quanto per la realizzazione di interventi finanziati dal microcredito con cui si cimentano giovani progettisti.

Tre: Potere

La monetizzazione delle opere prefigurate da architetti e ingegneri non rientra, se non marginalmente, negli interessi della storia e della critica contemporanea. I motivi di questa assenza sono molti, ma il principale è la difficoltà ad elaborare una convincente interpretazione del rapporto tra architettura e potere e, in particolare, a pronunciarsi sul ruolo, che in questo rapporto, svolge il denaro.

Quattro: Tattiche

La rinuncia a riflettere sui flussi economici direttamente connessi con le opere di architettura per il timore di affrontare temi scabrosi, come gli strumenti della speculazione edilizia o gli obiettivi del capitalismo immobiliare, è una scelta tattica ma non strategica. Un discorso trincerato dentro confini, che includono solo poche e selezionate manifestazioni dell'architettura.

tura nel mondo, corre il rischio di dimostrarsi incapace di analizzare i processi che la determinano e per questa ragione di essere condannato alla marginalità o, peggio, di essere riconosciuto come il prodotto di una falsa coscienza.

Cinque: Processi

In una fase della storia degli insediamenti umani che è attraversata da enormi contraddizioni, caratterizzata sia dalla contrazione sia dall'estensione dei processi di urbanizzazione e nella quale sono in movimento enormi flussi di ricchezza, sarebbe velleitario credere che la comunità dei progettisti possa influire, anche solo parzialmente, sui meccanismi economici che governano il pianeta. Allo stesso tempo però è innegabile che i progetti di opere di architettura e ingegneria assumono un ruolo essenziale per l'efficienza di questi stessi meccanismi ad ogni latitudine.

Sei: Titoli

Nella loro dimensione cartacea e nella loro estensione digitale tutti i progetti di architettura contengono notazioni destinate a programmare i tempi e i modi nei quali potranno essere realizzate opere, che prevedono flussi di denaro sotto forma di costi o ricavi. In termini economici i progetti possono quindi essere considerati titoli, che garantiscono operazioni a credito o a debito per chi li possiede.

Sette: Valori

Architetti e ingegneri contribuiscono dunque al successo o all'insuccesso dei titoli progettuali che sono chiamati a configurare, ottenendo in cambio diritti d'autore sulle immagini che ne documentano l'esistenza e un compenso per le loro prestazioni professionali, compreso il coordinamento di altre competenze. La transazione contrattuale tra progettisti e committenti si fonda pertanto sulla parificazione tra valori estetici, tecnici ed economici.

Otto: Contratti

Accettando di disporre di un riconoscimento in quanto autori, i progettisti sono spesso vincolati a contratti non particolarmente vantaggiosi: essi rinunciano ad ogni diritto sui prodotti della loro arte e sui risultati della loro tecnica e sono chiamati ad assumere oneri,

Un discorso trincerato dentro confini, che includono solo poche e selezionate manifestazioni dell'architettura nel mondo, corre il rischio di dimostrarsi incapace di analizzare i processi che la determinano.

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a loro volta monetizzati, per assicurare le responsabilità del proprio operato. Inoltre essi accettano che una volta sciolti i legami con i committenti, i titoli progettuali cui hanno contribuito, convertiti o meno in opere realizzate, possano divenire il supporto per altri interventi di altri progettisti.

Nove: Mercati

I titoli progettuali alimentano il più vasto mercato globale esistente. La borsa dei valori immobiliari quota selettivamente ed empiricamente ogni porzione del suolo planetario, naturale o artificiale: il suo andamento è tra i fatti che possono essere misurati con la semplice osservazione degli insediamenti umani; la sua ciclicità rileva l'abbandono, il sottoutilizzo, la rovina, il degrado di manufatti, edifici, tessuti, quartieri, villaggi, nuclei urbani in altri tempi floridi; le sue bolle e i suoi crolli innescano euforie e crisi in grado di condizionare tutti i settori economici e di influire sulla tenuta del corpo sociale; la sua stessa esistenza è, in definitiva, la condizione per la quale ogni giorno progettisti e committenti si rimettono al lavoro per costruire nuovi titoli progettuali.

Dieci: Stime

Nella prospettiva del mercato le misure che sono state fissate negli elaborati progettuali o che sono state concretizzate nelle opere realizzate, assumono specifici valori secondo le regole e i principi della disciplina estimativa. In particolare, i giudizi di stima e la loro oggettività probabilistica si basano sul riconoscimento della normalità statistica dei dati assunti. Così le simulazioni dedicate al comportamento degli attori economici nella produzione e nella compravendita di beni, servizi e risorse immobiliari, si fondano sul principio di ordinarietà, che orienta sia la deduzione sia la predizione dei giudizi di stima. Per queste ragioni le retroazioni dei processi estimativi sui modi con cui si attribuiscono misure agli oggetti contenuti nei titoli progettuali dovrebbero costituire uno dei principali soggetti di ricerca, per chi si occupa di teoria e di pratica dell'architettura in un'epoca caratterizzata dalla complessità dei mercati immobiliari e dal loro perenne stato di crisi.

La radice del problema

Dunque chi opera nel complesso processo di costruzione dello spazio abitato, può constatare come, nell'attualità, il capitalismo finanziario sia riuscito a modificare le regole di un gioco antico. Misure e stime appaiono ampiamente condizionate da titoli e valori espressi da contratti e mercati, secondo tattiche che, normalmente, assecondano gli assetti del potere. Oggi più che mai, il denaro pervade ogni manifestazione dell'architettura, al punto tale che non è possibile ignorarne il ruolo – condizionante e distorsivo – a meno che non si sia mossi da ostinazione o da ingenuità. Purtroppo, l'occultamento dei flussi economici connessi con la realizzazione di opere di architettura e ingegneria civile è un'operazione semplice, che si può compiere limitandosi ad osservare quanto è immediatamente visibile, evitando di sondare le parti che restano nell'ombra. È sorprendente constatare come nelle storie e nelle critiche dell'architettura moderna e contemporanea, sia carente, se non addirittura mancante, una seria ricognizione di come sia evoluto il rapporto tra gli strumenti di misura e stima dei processi costruttivi e i mezzi economici e finanziari che li sottendono. Riviste e monografie d'architettura selezionano dalla complessità di un progetto solo gli elementi biografici e iconografici più appariscenti, evitando di commentare i fatti e i documenti che consentono a un'opera di convertirsi in costruzione attraverso il finanziamento dei suoi costi. È un *cliché* ampiamente sperimentato nella pubblicizzazione dei prodotti dell'*industrial design*, la cui legittima presenza nel mondo è raramente posta in discussione, ma dal momento che la rappresentazione dell'architettura usa la geometria come proprio *medium*, per comprendere le ragioni di questa scelta occorre risalire alle origini del problema.

La doppia geometria dell'architettura

Secondo Michel Serres, le origini della geometria sono caratterizzate da uno sdoppiamento (Serres, 1984). Da una parte ci sarebbe un fondamento qualitativo, dominato dai riferimenti astronomici, dalle proiezioni e dalle astrazioni, al cui vertice si trovano Talete, i teoremi dell'omotetia, la misura dell'altezza della piramide di Cheope e uno gnomone: l'ago che

Per queste ragioni le retroazioni dei processi estimativi sui modi con cui si attribuiscono misure agli oggetti contenuti nei titoli progettuali dovrebbero costituire uno dei principali soggetti di ricerca.

Il rapporto tra queste due geometrie e il potere è naturalmente diverso. Talete agiva nella piena libertà della speculazione intellettuale. Gli agrimensori soggiacevano al Faraone e avevano il compito di misurare le terre riemerse dalle inondazioni per ripristinare gli obblighi fiscali dei coloni.

stava al centro dei quadranti solari per registrare le ombre proiettate dal Sole (Serres, 1986).

Dall'altra ci sarebbe un fondamento quantitativo, intriso di riferimenti alla terra e sporco del fango del Nilo, al cui vertice si trovano gli agrimensori egiziani, che secondo Erodoto stabilivano con l'uso di strumenti gromatici come ripristinare gli allineamenti poderali dopo i cicli alluvionali (Farinelli, 2003).

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La geometria quindi si sarebbe sviluppata attraverso il progressivo affinamento di queste due linee di azione: una astratta, oggettiva, astronomica e libera; l'altra concreta, soggettiva, terrestre e fiscale. Questa biforcazione originaria ha conseguenze nel campo dell'architettura, che ricorre alla geometria per tutte le sue rappresentazioni.

Lo gnomone e la groma possono infatti essere considerati i capostipiti di una famiglia di strumenti, che sopravvive ancora sui tavoli degli architetti e nelle mani degli addetti in un cantiere. Con squadre, compassi e i loro derivati digitali si disegnano versioni astratte dell'architettura, che aspirano ad essere valutate come prodotti di arte e tecnica. Con fili a piombo, livelle e i loro derivati digitali si realizzano in concreto i segni codificati nelle geometrie progettuali. Fin dalle fasi di tracciamento e di allestimento di un cantiere, questi esercizi di concretezza intensificano i flussi economici che, dopo aver individuato nell'area di intervento il loro terminale, sono destinati ad accompagnare l'opera costruita per il suo intero ciclo di vita.

Ma mentre la geometria, in quanto scienza, ha utilizzato l'ambivalenza delle proprie origini per interrogarsi, rinnovarsi e offrire occasioni di conoscenza ad altri campi del sapere (Bartocci, 2012), l'architettura ha utilizzato il suo *medium* matematico, per radicalizzare l'opposizione tra una dimensione astratta e una concreta dei titoli progettuali. In particolare, teoria, storia e critica dell'architettura contemporanee preferiscono occuparsi delle manifestazioni della prima, ignorare le ragioni della seconda e lasciare

quasi indeterminato il campo di ricerca che dovrebbe spiegarne le reciproche relazioni ed influenze.

Quadrature e cubature del metro

Nel 2016, durante la XV Biennale di Architettura di Venezia, l'Arsenale ha ospitato alcuni allestimenti dedicati all'esplorazione del rapporto tra progetto di architettura e finitezza delle risorse (Aravena, 2016). Una di queste era intitolata "Dark Resources" ed era presentata dal collettivo progettuale ecuadoriano *Al Borde*.

Sulle pareti dello spazio assegnato erano documentati progetti di edifici, realizzati dal gruppo attraverso il ricorso a tecniche tradizionali e il coinvolgimento delle comunità locali. Sul pavimento erano tracciati nove quadrati, ognuno di un metro di lato, al cui interno si trovavano piccole scatole destinate a raccogliere sacchi di monete, tutti uguali tra loro. I quadrati di un metro, le scatole e i sacchi di monete costituivano le unità di misura necessarie a misurare le disparità nel costo di costruzione degli edifici realizzati in varie parti del mondo, prescindendo dal loro uso e dal loro significato per le comunità. Così all'interno del quadrato più sguarnito si potevano trovare solo una scatola e un sacchetto di monete, mentre in quello più affollato erano impilati 10 livelli costituiti da raggruppamenti di 9 scatole, tutte riempite da quanti sacchetti vi potessero essere contenuti. L'installazione documentava plasticamente le disuguaglianze economiche, che riguardano la realizzazione di opere edilizie in diversi luoghi del pianeta, segnalando come nei contesti più sfavoriti, dove non è nemmeno garantito il soddisfacimento delle necessità primarie, il progetto di architettura debba ricorrere, per compensare gli enormi *gap* iniziali, al reperimento di «risorse oscure», non direttamente monetizzabili.

L'aggettivo *dark* utilizzato da *Al Borde* era preso a prestito dalla cosmologia, che identifica con questo termine quella parte maggioritaria della materia, che, allo stato attuale delle conoscenze, non può essere identificata e, naturalmente, impiegata. Per quanto approssimativa, l'installazione di *Al Borde* spiegava come la geometria concreta dell'architettura non può prescindere da una unità di misura che riporta la valuta al numeratore (le scatole e i sacchet-

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Come la geometria concreta dell'architettura non può prescindere da una unità di misura che riporta la valuta al numeratore (le scatole e i sacchetti di monete) e lo spazio al denominatore (i quadrati di un metro di lato).

Con gli strumenti dell'analisi urbana le installazioni della X Biennale analizzavano selettivamente la concentrazione dello stock immobiliare nelle aree metropolitane.

ti di monete) e lo spazio al denominatore (i quadrati di un metro di lato).

Le nove figure tracciate sul pavimento evidenziano come, nella sua essenzialità, il metro quadrato sia da considerare come il più efficace supporto per comprendere, con immediatezza, l'interdipendenza tra le opere, che l'umanità realizza per abitare il pianeta e il denaro necessario alla loro realizzazione.

Dieci anni prima dell'installazione di *Al Borde*, la quadratura del metro era già stata protagonista di un sondaggio della geometria quantitativa, derivata dalla accumulazione di titoli progettuali.

Nel 2006, durante la X Biennale di Architettura, Ricky Burdett aveva fatto allestire i modelli tridimensionali di alcune metropoli, registrando dentro i confini amministrativi dei casi studio, i picchi di concentrazione della popolazione residente, censita in un tempo determinato (Burdett, 2010). Espressi attraverso forme tridimensionali, i dati sulla densità urbana, non registravano solo il rapporto matematico tra l'ampiezza delle aree metropolitane e il numero di abitanti insediato per unità di superficie, ma producevano inedite topografie. Istantanee dello sviluppo metropolitano, questi modelli tridimensionali rappresentavano così il calco della potenziale impronta ecologica delle metropoli indagate; le loro sezioni tomografiche contenevano a loro volta i dati essenziali per misurare l'andamento dei valori immobiliari, in virtù delle corrispondenze dimensionali con la stessa, fondamentale, unità di misura fondamentale usata da *Al Borde*, il metro quadrato, qui declinato secondo un più complesso rapporto (ab/mq in funzione di €/mq). Con gli strumenti dell'analisi urbana le installazioni della X Biennale analizzavano selettivamente la concentrazione dello *stock* immobiliare nelle aree metropolitane.

Con gli strumenti del progetto di architettura sulle pagine di un numero di «Casabella» pubblicato nel 1971, i membri di *Superstudio* avevano indicato una soluzione geometrica al problema della diffusione su scala planetaria di processi di urbanizzazione sempre meno controllabili. «Monumento Continuo» metteva in scena la dialettica tra un multiforme crinale artificiale nel quale sarebbe stato possibile concentrare tutti gli sforzi edificatori dell'umanità e amplissime porzioni di suolo, liberato dalla pres-

sione insediativa, sul quale sarebbero sopravvissute le testimonianze di precedenti ordini insediativi, considerati, a loro volta, alla stregua di reperti archeologici. Opportunamente diversificato nei luoghi in cui appariva, basato su un elementare principio di cubatura del metro e rigorosamente rappresentato per frammenti, il “Monumento Continuo” metteva in scena la relazione tra la qualità delle nuove forme urbane e le quantità ipotizzate per assecondare lo sviluppo dell’economia immobiliare. Il progetto perseguiva una specifica tesi sulla storia delle città e dei territori, collocandosi come spartiacque tra la genealogia delle città lineari, da Le Corbusier a Miljutin, a Soria y Mata, e l’apoteosi della grande dimensione e delle megastrutture, che, molto tempo dopo, sarebbe riapparsa sotto il nome di *bigness* (Koolhaas, 1995). Selezionate in un lotto di esempi non abbastanza nutriti, le installazioni di *Superstudio*, Burdett e *Al Borde* hanno in comune la scelta di ricondurre analisi urbane e progetti architettonici ad elaborazioni basate su unità di misura (come il metro cubo e il metro quadrato) che, per quanto elementari possano apparire, sono particolarmente adatte a descrivere gli effetti dei processi con cui l’umanità costruisce il suo *habitat*.

Stimare e speculare

Nelle operazioni di stima dei costi di costruzione di opere descritte da elaborati progettuali i fattori dimensionali sono i moltiplicandi e il denaro è il moltiplicatore. I moltiplicandi assumono indice 1, 2 o 3 a seconda che siano riferiti a misure in linea, in superficie o in volume. A tutti i livelli della scala edilizia, il risultato della somma dei prodotti di queste moltiplicazioni rappresenta il più probabile costo di costruzione di un bene, in base al quale si mantiene, o si interrompe, il rapporto contrattuale tra progettista e committente. La prosecuzione di questo rapporto passa attraverso complesse attività negoziali (Armando, Durbiano, 2017), che retroagiscono sui documenti di natura tecnica ed economica fino a quando è possibile determinare un costo coerente con quello di altre opere simili a quella progettata, ma già realizzate. Quando il committente non dispone integralmente delle risorse necessarie alla loro realizzazione, i valori economici da finanziare diventano i dividendi

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La limitata capacità di valutare le opzioni disponibili e le relative conseguenze sono riconoscibili negli esiti il più delle volte deludenti dei processi di trasformazione urbana, soprattutto recenti.

di nuove operazioni che assumono come divisori variabili il periodo di realizzazione dell'opera, la durata del suo eventuale sfruttamento commerciale, il rischio dell'investimento, il costo-opportunità del capitale, il punto di ritorno dell'investimento. Livelli crescenti di complessità accompagnano la stima dei rendimenti percentuali che devono garantire la convenienza dell'operazione a tutti i livelli della catena del valore mobilitata per gli impegni assunti in termini di debito, credito, ritorni attesi. Se dal punto di vista teorico la dematerializzazione del progetto di architettura e la sua assimilazione a un investimento offre agli sviluppatori lo strumento analitico per valutare *ex-ante* la convenienza a realizzare l'opera, i fallimenti di numerose operazioni immobiliari smentiscono la capacità di giudicarne la potenziale redditività, mancando strumenti affidabili per la previsione dei flussi di cassa nel tempo. Debolezza operativa del postulato estimativo dell'ordinarietà, incertezza epistemica ed ontologica (Salling, Leleur, 2006), natura multidimensionale del rischio nel settore immobiliare sono alcuni degli aspetti che mettono alla prova le capacità decisionali dei soggetti economici.

In questo contesto il ricorso ad analisi di sensitività e di rischio dei risultati, la costruzione di scenari e l'introduzione di strumenti in grado di tener conto della dinamicità delle scelte di investimento rappresentano una possibile soluzione per prefigurare non solo la convenienza del progetto ma anche la distanza tra rendimenti attesi ed effettivi.

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Per spiegare le ragioni di questi fallimenti le discipline estimative si concentrano sulla complessità di fasi attuative che possono determinare incompiutezza o sulla promozione di forme e di funzioni differenti rispetto alle ipotesi di partenza che producono impatti sulle qualità attese (ambientali, economiche, sociali) spesso non congruenti con l'entità delle risorse mobilitate.

Dal canto loro i contributi della geografia, della sociologia e dell'economia urbana puntano l'attenzione sull'incoerenza tra le condizioni di partenza

e gli scenari preventivati. Autori come Aish Amin, Richard Sennett, Saskia Sassen e lo stesso Ricky Burdett mettono in evidenza gli effetti distorsivi di processi di costruzione dello spazio abitato, evidentemente incapaci di prendere le giuste misure ai luoghi che pretendono di trasformare (Un-Habitat, 2018).

In uno svariato numero di contesti urbani e metropolitani, grandi firme dell'architettura internazionale, assoldate da importanti operatori del *real estate* globalizzato, non hanno offerto convincenti prove di intelligenza progettuale. I quartieri direzionali di Canary Wharf a Londra e de La Défense a Parigi, il distretto finanziario di Pudong a Shanghai, la città nuova coreana di Songdo sono solo alcuni esempi dell'incapacità di risolvere problemi complessi malgrado l'estesa disponibilità di risorse economiche. In questo panorama, le discipline del progetto dovrebbero riconoscere che nella maggioranza dei casi i fallimenti più eclatanti prendono origine dall'approssimativa soluzione di problemi che hanno un fondamento geometrico. Quando alle trame impresse su suoli fragili e stratificati da culture ed economie espresse localmente vengono opposte le astratte proiezioni di modelli insediativi concepiti per garantire bilanci positivi a complesse operazioni di finanza immobiliare, i difetti di integrazione spaziale producono territori discontinui e lacerati, non risarcibili se non in tempi medio lunghi.

Gli effetti di questi processi sono oggi dirompenti ovunque, come dimostra l'accrescimento su scala globale delle quote di *stock* immobiliare invenduto, dismesso o in disuso, nonostante molti tentativi per porvi rimedio siano stati elaborati nel contesto di quelle stesse economie avanzate, che hanno dato il via al deterioramento del quadro globale.

Nonostante numerose iniziative promosse con gli strumenti della programmazione complessa abbiano rappresentato una significativa opportunità di miglioramento della città pubblica grazie alla partecipazione del privato (Stanghellini, 2012), le opere realizzate in cambio di capacità e flessibilità edificatorie in variante agli strumenti urbanistici generali non sono state spesso in grado di rispondere alle effettive esigenze delle municipalità, quando non ne hanno aggravato i bilanci, in quanto i vantaggi di breve ter-

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Strategie oggi largamente condivise ipotizzano più consapevoli relazioni con le risorse ambientali, una diversa concezione dello sviluppo economico, una maggiore consapevolezza delle opportunità offerte dai processi di recupero, riuso, riciclo del patrimonio insediativo.

mine non sono commisurati ai costi di manutenzione e gestione che su di esse ricadono.

La sostituzione dei parametri dimensionali e quantitativi utilizzati per la misura degli standard con altri, qualitativi e prestazionali, non ha contribuito al miglioramento dei contesti urbani e metropolitani che reclamavano soluzioni nuove, efficaci, incisive.

L'intelligenza del progetto

Nel quadro dominato dalla crisi del capitalismo e in particolare della sua versione immobiliare, la contrazione insediativa (Oswalt, 2005/2006) ha proposto nuove sfide: l'accumulazione di un enorme *stock* immobiliare prodotto da precedenti fasi espansive soggetto a valorizzazioni fortemente differenziate, l'estensione dei processi di abbandono e sottoutilizzo con la conseguente rimodulazione selettiva della rendita immobiliare.

Per trovare una risposta a queste mutate condizioni, la cultura progettuale ha elaborato soluzioni che in buona parte attingono a contributi espressi nella seconda metà del secolo scorso. Strategie oggi largamente condivise ipotizzano più consapevoli relazioni con le risorse ambientali (Meadows, 1972; Rifkin, 1982), una diversa concezione dello sviluppo economico (Sen, 1991), una maggiore consapevolezza delle opportunità offerte dai processi di recupero, riuso, riciclo del patrimonio insediativo (De Carlo, 1980). Ritiratosi dal campo aperto della crescita urbana senza limiti, il progetto di architettura si è riposizionato sui terreni circoscritti dai sistemi insediativi esistenti.

A questo riposizionamento nello spazio alcuni autori hanno fatto coerentemente corrispondere una più coerente interpretazione dei tempi del progetto.

La generazione di un evento architettonico non si limita al breve spazio di tempo in cui viene progettato e costruito: comincia prima, quando sul filo della memoria degli eventi che lo hanno preceduto, si decide di metterlo in atto; e continua dopo, nell'uso, nelle trasformazioni che subisce, nelle memorie che suscita e che si trasferiscono in altri eventi che seguiranno. (De Carlo, 1981: 384)

Giancarlo De Carlo considerava la dilatazione dei tempi con cui si attuano le geometrie iscritte negli

elaborazioni progettuali il postulato essenziale per affermare tre tesi: l'architettura non è una merce qualunque; il suo linguaggio è universale; il suo processo è continuo e ininterrotto.

Nella sua biografia di progettista, il riconoscimento dell'architettura come eccezione nell'ambito dei prodotti umani dotati di un mercato, era la conseguenza dello sforzo progettuale operato su uno degli emblemi del paesaggio italiano: Urbino. De Carlo aveva maturato la convinzione che ogni comunità eredita un patrimonio molto più esteso di quello misurato dai normali indicatori di reddito e contribuisce a arricchirlo con i mezzi dell'architettura, realizzando un intreccio, complesso e labirintico, di forme e figure geometriche, che si apprendono in opere materialmente costruite grazie al contributo di strumenti e tecniche, in evoluzione costante. Se concepita e realizzata al di fuori di questa consapevolezza, l'architettura diviene schiava della "dipendenza che l'ha sempre dannata", trasformandosi, prima, "in uno strumento di produzione e merce e, poi, in soggetto e oggetto di consumi artificialmente indotti" (De Carlo, 1980).

Oltre il mercato e la moneta

A ben guardare le osservazioni di De Carlo hanno trovato una sorprendente e, probabilmente, involontaria applicazione in alcune tesi espresse dalla disciplina dell'estimo e della valutazione economica dei progetti.

Due movimenti in particolare vanno attentamente osservati.

In primo luogo, il tentativo di superare il mercato come riferimento unico ed essenziale.

Gli studi sulla stima di beni come il paesaggio, l'ambiente, il patrimonio storico e culturale, tra gli altri, hanno operato nella consapevolezza che il mercato si distingue per noti e significativi fallimenti e che dunque l'insieme delle compravendite non restituisce che una frazione dei valori in gioco. (Brandon, Lombardi, 2005; Fusco Girard, Nijkamp, 1997).

In secondo luogo, anche il riconoscimento della moneta come *medium* primario è apparso inadeguato. Le valutazioni di tipo multicriteriale hanno permesso di rappresentare e simulare processi decisionali, nel quale sono state assunte funzioni obiettivo non

De Carlo aveva maturato la convinzione che ogni comunità eredita un patrimonio molto più esteso di quello misurato dai normali indicatori di reddito.

Purtroppo, un sempre più ridotto ruolo della mano pubblica nella trasformazione dell'ambiente costruito ha fatto mancare concrete occasioni di impiego della ampia e sofisticata produzione metodologica e tecnica elaborata a questo proposito.

L'aumento di densità da una parte appare desiderabile sotto il profilo ambientale, dall'altra può risultare socialmente ed economicamente inaccettabile.

più confinate alla semplice rappresentazione monetaria, ma in grado di identificare utilità espresse da una molteplicità di scopi, anche di peso distinto e mutevole (Fattinanzi, Mondini, 2015).

In particolare, le evoluzioni disciplinari, che hanno ipotizzato un orizzonte operativo oltre il mercato e la moneta, hanno anche auspicato l'esistenza di un decisore pubblico capace di attrezzarsi adeguatamente nei confronti delle sfide imposte dai processi decisionali caratterizzati da crescenti livelli di complessità. Purtroppo, un sempre più ridotto ruolo della mano pubblica nella trasformazione dell'ambiente costruito ha fatto mancare concrete occasioni di impiego della ampia e sofisticata produzione metodologica e tecnica elaborata a questo proposito. Ciononostante lo sforzo di affrancare misure, valori e stime coinvolti nei processi di costruzione dello spazio abitato dal ruolo direttivo della moneta e dei mercati, continua ad offrire spunti propulsivi.

In questa prospettiva le riflessioni sulla città che si trasforma su se stessa e accetta senza remore le sfide ambientali e sociali, hanno prodotto due importanti linee di ricerca. La prima riguarda la densità come principio insediativo, la seconda i cicli di vita delle forme fisiche nello spazio abitato.

Il ritorno dei solidi urbani

Recentemente alcuni contributi (Owen, 2009; Glaeser, 2011), riflettendo su indicatori propri all'analisi quantitativa delle strutture insediative, hanno segnato un punto a favore della città densa contro modelli a bassa densità. Questi pronunciamenti sono stati espressi, non tanto e non solo in ragione di osservazioni dedicate al consumo di risorse non rinnovabili, come il suolo agricolo o il paesaggio, ma anche e soprattutto in virtù di positive simulazioni del bilancio dei flussi di materia ed energia impiegate. Poiché la città densa consuma per abitante meno energia e materia dei luoghi caratterizzati dalla presenza di insediamenti a bassa densità, il progetto architettonico e urbano che volesse assumerla come condizione operativa, ritroverebbe, in semplici indicatori quantitativi, valori guida coerenti con obiettivi largamente condivisi. Queste osservazioni valgono tanto in prospettiva quanto in retrospettiva come hanno dimostrato alcuni studi recenti sui bilanci energetici

della Parigi del Barone Haussmann (Jallon, 2017). Ma se in passato gli indici di densità hanno rappresentato un limite a processi speculativi, rappresentando un'inibizione rispetto alla traduzione materiale di rendite e profitti, oggi il tema si complica. L'aumento di densità da una parte appare desiderabile sotto il profilo ambientale, dall'altra può risultare socialmente ed economicamente inaccettabile. Questa ambivalenza dimostra come il numero indice possa riflettere valori molteplici e discordanti, in grado di traguardare, allo stesso tempo, obiettivi desiderabili collettivamente, come la minimizzazione dei costi energetici e materiali delle trasformazioni urbane, e obiettivi socialmente discutibili, come l'appropriazione di quote rilevanti di ricchezza collettiva da parte di settori inerti, o la loro conseguente concentrazione a discapito di una più ampia socializzazione.

L'esempio dimostra come le analisi geometriche, con il loro portato di indici, rapporti e relazioni, impongano la sofisticazione degli strumenti di indagine e osservazione e richiedano un maggiore sforzo di interpretazione. Così fino a quando la disciplina estimativa si è limitata a misurare, con la massima oggettività possibile, il valore dei beni immobili con riferimento ai mercati delle compravendite e della produzione edilizia, la maggior parte degli indicatori risultavano inerti alle interpretazioni. Oggi le nuove costruzioni quantitative riflettono una natura molteplice reclamando rinnovate dialettiche, che inducono a considerare maturi i tempi per una rifondazione nella cultura del progetto architettonico dei modi di procedere attraverso misure e stime (Fattinanzi, 2018).

Dentro i cicli di vita

I numeri indice riportano semplici aspetti spaziali del processo di trasformazione.

Un indice edificatorio riflette la possibilità di intervenire aumentando la volumetria complessiva del fabbricato ovvero limitando la sua costruzione al volume attuale.

L'attuazione di un percorso di rigenerazione dell'ambiente costruito, basato sull'applicazione del concetto di ciclo di vita alle architetture, alle infrastrutture, alle città e ai paesaggi (Marini, Corbellini, 2016; Fa-

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Le discipline del progetto architettoniche e della valutazione sono chiamate a mettere alla prova la capacità del progetto stesso di capitalizzare l'intelligenza distribuita, di soggetti noti e inattesi, di interessi strutturati e diffusi.

Nuove geometrie sono necessarie per consentire al progetto di architettura di essere considerato uno strumento in grado di contribuire al confronto con inedite crisi globali, ecologiche e ambientali, economiche e sociali.

bian, Munarin, 2017) impone un radicale intervento per quantità e natura dei beni in gioco.

Il ricorso ad un approccio geometrico multidimensionale permette di valutare se e come il riuso, nella variante della demolizione e ricostruzione, sia ammissibile, o meno, non solo dal punto di vista dell'edificazione possibile – e dunque della ipotetica speculazione consentita – ma anche rispetto ad indicatori qualitativi quali la consistenza e l'integrabilità del patrimonio costruito, la qualità di beni e servizi, e, in ultima istanza, il valore che è possibile estrarre da essi.

Il numero, espresso da questa valutazione, può legittimare tanto processi di incremento e speculazione, quanto, in altre circostanze, di selezione e abbandono.

In ogni caso l'interazione tra le scelte progettuali è destinata a generare esiti differenziati, secondo le logiche di un mercato più aperto: non più genericamente destinato alla crescita e all'espansione, ma rivolto a valorizzare scelte pubbliche e comportamenti collettivi più consapevoli, così come valori indipendenti dal mercato.

Alle geometrie rarefatte di esercizi progettuali che dichiarano implicitamente la propria indifferenza alla fitta rete degli interessi e delle volontà possono così subentrare rappresentazioni concrete in grado di operare con indici e valori, capaci di prefigurare scenari alternativi e coinvolgere risorse locali, evidenziando gli effetti nella trasformazione dell'ambiente fisico e della vita della comunità.

In queste mutate condizioni, le discipline del progetto architettoniche e della valutazione sono chiamate a mettere alla prova la capacità del progetto stesso di capitalizzare l'intelligenza distribuita, di soggetti noti e inattesi, di interessi strutturati e diffusi, esplorando territori non ancora presidiati da tecniche e metodi consolidati e ricercando un autentico confronto con la complessità del reale.

Nuove geometrie sono necessarie per consentire al progetto di architettura di essere considerato uno strumento in grado di contribuire al confronto con inedite crisi globali, ecologiche e ambientali, economiche e sociali (Sassen, 2008). In gioco c'è la possibilità di continuare a confidare nel progetto di architettura e nel piano urbanistico come strumenti per

la redistribuzione del reddito (Piketty, 2013; Deamer, 2013), mentre sullo sfondo si intravede la possibilità di superare le contraddizioni espresse da modelli interpretativi della storia e della cultura troppo a lungo trainati dal prefisso *post-* (Touraine, 1969; Lyotard, 1979; Choay, 1992; Soja, 2000).

Verso nuove geometrie

Nell'epoca dell'affermazione su vasta scala dei modelli imposti da CAD e BIM, evocare l'irruzione di nuove geometrie a sostegno delle operazioni progettuali potrebbe apparire rischioso o velleitario. Eppure si tratta di un passaggio essenziale e non dilazionabile.

Nel 1984 Alberto Pérez-Gómez aveva sostenuto che l'architettura non poteva "più dipendere da una geometria simbolica per i suoi scopi". Recentemente lo stesso autore si è visto costretto a precisare la sua opinione in merito al primato, nel linguaggio architettonico contemporaneo, di geometrie astratte, parametriche e anti-euclidee, utilizzate dal mercato immobiliare alla stregua di vettori di messaggi pubblicitari.

Negli ultimi anni, il *software* per computer ha reso possibile un ritmo dell'innovazione geometrico-formale nel progetto che sarebbe stato totalmente impensabile 20 anni fa. La novità, sembra quasi inevitabile, è presentata come una prova apparentemente indiscutibile di qualità. Questa effervescenza creativa – e anche la sua stravaganza – potrebbe essere eccitante per alcuni. Ma, allo stesso tempo, [...] l'architettura rimane distaccata dai luoghi in cui dovrebbe essere radicata, e scollegata dai modi di vita dei suoi abitanti e dalle storie che dovrebbe invece considerare fondamentali. Che racconti seducenti ed edifici complessi attirino i soldi dei turisti o la bancarotta delle amministrazioni pubbliche grazie ai loro costi soverchianti, alla fine ha poco senso per il normale cittadino dal momento che questi fatti non contribuiscono quasi per nulla alla salute psicosomatica dell'umanità. (Pérez-Gómez, 2016)

A questa deriva autoreferenziale Pérez-Gómez oppone una diversa "sintonizzazione" con la realtà, basata sulla conoscenza dei meccanismi, fisiologici e neurologici, con cui il corpo umano interpreta lo spazio architettonico. Dalla prospettiva delle neuroscienze

Nell'epoca dell'affermazione su vasta scala dei modelli imposti da CAD e BIM, evocare l'irruzione di nuove geometrie a sostegno delle operazioni progettuali potrebbe apparire rischioso o velleitario. Eppure si tratta di un passaggio essenziale e non dilazionabile.

Potrebbe valere la pena riflettere su come le misure registrate negli elaborati progettuali sono organizzate per trasmetterli, attraverso la mediazione delle risorse economiche che li traducono in opere.

l'orizzonte qualitativo delle geometrie, tradizionali o sperimentali, non può che apparire stimolante e persino in grado di potenziare gli strumenti per la concezione e la realizzazione dell'architettura. Ma mentre i contenuti e gli sviluppi dell'età dell'informazione (Castells, 1996) sembrano farsi sempre più confusi e contraddittori potrebbe valer la pena riflettere non solo su come vengono recepiti dai sensori del corpo umano il messaggio e il significato architettonico ma anche su come le misure registrate negli elaborati progettuali sono organizzate per trasmetterli, attraverso la mediazione delle risorse economiche che li traducono in opere. I numeri e gli indici, le figure e le forme, i dati e gli algoritmi, le proiezioni analogiche e digitali con cui ogni giorno milioni di progettisti "prendono le misure del paesaggio" che abitano (Corner, MacLean, 1996) sono, a tutti gli effetti, una parte essenziale di quel sistema di informazioni su cui si regge il mondo. Evitare che questa eccezionale mole di dati sia destinata solo ad alimentare l'opaca galassia delle informazioni da cui trarre profitto, per tornare ad essere iscritta in più coerenti e trasparenti geometrie multidimensionali è probabilmente una prospettiva di ricerca interessante per quelle discipline che mettono al centro della propria indagine il progetto di architettura e la valutazione dei suoi effetti. L'orizzonte è ampio e una via, per quanto complessa e tortuosa, è tracciata.

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money

• *social*

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gy • *docu-*

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• *inten-*

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Two Questions on the Ontology of Money

An Imaginary Dialogue between John Rogers Searle and Maurizio Ferraris

Angela Condello

in dialogue with John Rogers Searle and Maurizio Ferraris

Abstract

This dialogue reflects and synthesized the content of a recent publication (Einaudi, 2018) entitled *Il denaro e i suoi inganni* (by John R. Searle and Maurizio Ferraris, ed. by Angela Condello). The two philosophers present their perspectives on the ontology of money, which are different and yet interestingly intertwined. On the one hand, Searle returns on the crucial function of intentionality in the construction of social reality: it is intentionality that gives value to banknotes. On the other hand, Ferraris responds with his theory of documentality, that today – with bitcoins and blockchains – must be defined as “documeriality”. Money emerges as the paradigmatic social object, which we should observe as a meaningful symbol of contemporary societies.

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Preliminary notes

When first discussing about a book on money with Maurizio Ferraris, and thus when first confronted with the possibility of going back to the basic structure of his social ontology, John Searle told me that he was very excited about it. And that he was excited for two main reasons. Firstly, because he would have one more chance to affirm his theory of intentionality and to try and criticize a theory constructed around the constitutive power of recordings, traces, and documents. In other words, he knew he could have one more chance to discuss – and eventually criticize – a philosophy which has many affinities with Jacques Derrida's grammatology. Secondly, because he had never reflected on money, and yet he had recently got to the conclusion that the example of money was everywhere in his books. Every time he would mention the paradigmatic social object, Searle would refer to money. But never before two years ago had he engaged in writing an entire essay on this. All of us use money everyday, even if often unfamiliar with economic and financial theories. Yet we need philosophy in order to understand what money is. Maurizio Ferraris, John Searle and I are very grateful to Einaudi, and to Andrea Bosco, who believed in this project since the very beginning. Intentionality and documentality emerge, from the theories of these two world-leading philosophers, as complementary aspects of our social world.

On March 13th 2018, *Il denaro e i suoi inganni* (Einaudi) was finally published. I had the honor to translate John's chapter, to edit the volume and to present my own personal perspective on their theories. Searle and Ferraris are undoubtedly two authorities in the field of philosophy both in the continental and in the analytic tradition. They have engaged in the field of social ontology, that is to say that branch of philosophy that focuses on the objects constituting reality and on our relationship with them. Synthetically, their positions could be summarized as follows: on the one hand, Searle believes that social reality (institutions, professional titles, money, property, etc.) is constructed by subjects. In order to exist, something like a 5 dollars banknote must be represented and collectively recognized as valid by a sufficient amount of subjects within a community. Ferraris, on the other hand, claims that collective intentionality does not explain the complexity of the social world. In order to understand this world, we must look instead at documents, recordings where the intentionality of which Searle speaks is deposited. Without such a system of traces, there would be no social world. The double perspective (intentionality; documentality) presented in the book offers an interesting insight also for architectural theory, particularly as far as the theory of project is concerned. The project in architecture is another paradigmatic hybrid that integrates intentions and traces. In some sense, this work on money suggests an innovative interpretation of social reality in terms of an "intentional grammatology". The ontological condition of money, as well as the ontological condition

of the documents of an architectural project, describes social reality as the product of both intentionality and documentality.

Going back to the “symbolic” social object analyzed in the book, money, we could say that Searle explains how it mobilizes the social world by creating obligations, rights and possibilities, with the same peremptoriness of physical injunctions. On the other hand, Ferraris retraces the essence of money, which is recording: today, money has been reduced to pure bits on a computer (bitcoins) and it reveals an essence which is older than the pyramids. This book presents an exemplary dialogue between an analytic philosopher and a continental philosopher, who are united by a passion for speaking clearly about concrete things.

Two questions on money (A. Condello, J. R. Searle, M. Ferraris)

Since unfortunately Searle lives on the other side of the earth, in Berkeley (California), I was obliged to reconstruct their dialogue through their texts, and by making reference to conversations the three of us had in different places, such as Torino, Berkeley, Paris, Rijeka, Bonn.

Through the reconstruction of their theories as they emerge from the book, and additionally thanks to these occasions of exchange, I imagined to ask them the following questions.

Question One: why is philosophy necessary to understand what money is?

Question Two: Why are the notions of “intentionality” and “documentality” necessary to understand the ontology of money?

Here is how they replied.

John Rogers Searle

When I am asked about the nature of the social object that we call money, I always turn towards my reflections on language. I think social ontology cannot say under what conditions would it be true to say that the object in my hand, a twenty dollar bill in this instance, is money? In order to answer this question we need to analyse a complex series of questions typical of the philosophy of ordinary language (parts of this text constitute an integrated and broadened elaboration of an article that John Searle published on the Cambridge Journal of Economics).

You can deliberately depart from usage, but to the extent that the investigation is to be philosophically relevant, it has to be anchored in ordinary language. Exceptions would be in very technical subjects, so if you are looking at the philosophical implication of superposition in quantum mechanics, the ordinary usage of words of like “superposition” and “quantum mechanics” is likely to be of no use to you. But for such traditional philosophical problems of truth, causation, goodness, etc., there is no escaping ordinary language.

Also, it might seem that the nature of money is a technical problem for economists and that amateurs and laypersons, like myself, should not attempt to meddle. I think that there are probably lots of technical questions about money – for example about how interest rates affect money supply and about the marginal propensity to consume – which are far beyond my comprehension. However, my experience has been that a lot of technical sounding disciplines rest on unstated philosophical assumptions and it is not a bad idea for somebody to come in from outside and have a look. This happened to me in my dealings with Artificial Intelligence where I found that many workers in artificial intelligence failed to understand certain fundamental distinctions between computer simulations and mental processes (Searle, 1984). In any case, I am proceeding with my amateur's attempt to understand the nature of money.

It seems to me the right strategy to adopt an answer to this question is first to give a definition of money and then to analyze how certain entities can satisfy that definition and certain others cannot. The thesis of the article can be stated in one sentence: Money is a status function. In order to explain that, I have to explain what is money and what is a status function. Before doing that, I need to clarify certain other absolutely fundamental distinctions and I will start with the nature of objectivity and subjectivity.

Mountains, molecules, oceans, and galaxies have an existence which is independent of anyone experiencing them. They are ontologically objective. Pains, tickles, and itches, on the other hand, are ontologically subjective because they only exist insofar as they are experienced by human or animal subjects. One importance of this distinction is that you can have epistemically objective claims about a domain that is ontologically subjective. Consciousness, for example, is obviously ontologically subjective. Conscious states only exist insofar as they are experienced, but claims about consciousness made in the neurobiological science of consciousness can nonetheless be epistemically objective. Failure to notice this fundamental point is quite common.

Lots of entities are, on the other hand, mind dependent. Even entities about which we can make epistemically objective claims, like money, private property, government, and marriage. All of these exist only relative to human attitudes. They are not observer independent, they are observer relative or observer dependent. As far as the relation of these two distinctions is concerned, we should notice that all observer relative phenomena contain elements of ontological subjectivity because they only exist insofar as they are thought of, or regarded, as existing. Nonetheless, about many such phenomena, we can make epistemically objective claims. Again, where money is concerned this obviously the case. Money exists only insofar as something is thought to be money. Its existence is observer dependent. However, we can nonetheless make epistemically objective claims about this observer dependent domain. The fact that I have a twenty dollar bill in my hand is an epistemically

objective fact even though the fact that it is a twenty dollar bill contains elements of ontological subjectivity. It is only a twenty dollar bill relative to our attitudes.

All observer-relative phenomena are created by conscious, or sometimes unconscious, mental states but the mental states that create the observer relative phenomena are not themselves observer relative. They have an existence which is, so to speak, completely intrinsic or observer independent. The fact that this thing is money exists relative to our attitudes, attitudes of people like me. But the fact that I have this attitude, "I think it is money," is not observer relative. That is an intrinsic fact about me.

Maurizio Ferraris

Which came first, money or the value we attribute to it? This question recalls another one, which was famously asked by Plato: are things pious because God loves them or does God love them because they are pious? The answer at first seems easy: value (or at least need) precedes money. But maybe it is not so. Of course, when we handle money we have the impression that it has value because the community in which we live feels that it does. But it is difficult to ignore the fact that when I handle money, I have the impression that the value lies in the money, not in my head: I may have wrong theories on money, or no theory at all, without compromising the value of the note I am holding. This is a psychological and philosophical riddle to solve: if money had value because we thought it did, why is it not enough to change our mind for it to lose value? And if we are not the ones who give money its value, then who is?

This question is similar to the chicken and egg problem. So, to avoid the circularity and solve the dilemma, I propose to distinguish two levels. A manifest level, reflecting our immediate intuition, where value precedes money; and a deep level, which is much less intuitive, where money determines value instead. In what follows I will try to show the legitimacy of the latter. So, after presenting the manifest image, I will look into the deep structure by which money (a paradigmatic document) precedes and produces its value. This fact is manifested in the sacred respect that "the colour of money" (to quote an old movie) arouses in its worshippers – namely, us all – no matter the ethical convictions, psychological dispositions, ideological orientations that guide us in earning it or not, wanting it or not, investing it rationally or wasting it all, saving it or throwing it out the window.

First, I will deal with epistemology, that is, what we know (or believe we know) of social reality. In other words, I will deal with the egg, distinguishing between the manifest image (the idea that social reality is constructed by intentionality, our thoughts and representations) and the deep structure (the idea that social reality emerges from what I call "documentality": a system of recordings with recognizable forms that is the origin of social objects, including money). Then I will move on to ontology, that is, the processes underlying the formation of the value

and normativity of money and, more generally, of documentality. In other words, I will deal with the chicken, trying to account for the deep structure by answering the question: what makes documentality (social objects) possible, if intentionality is not the ultimate foundation of social reality? Finally, I will introduce a third dimension that, in my opinion, is necessary to explain the nature of money and of social reality in general: namely, technology. By this term I mean the actions we perform in the social world, which most of the time are not guided by clear knowledge of that world, and therefore appear as competence without understanding. The underlying idea is that – contrary to what social contract theorists believe – we come into contact with the ontological dimension of the social world – that is, with the social forces (obligation, responsibility, motivation, intentionality) – not through understanding (epistemology) but through action. When I handle money, I do not apply some economic theory (or at least some real economic theory: maybe I think money has value it because it can be traded with gold, and of course I do not wonder why gold has value): I simply act. This attitude is the fundamental character of my relationship with reality in general. Then, little by little, through action, I might – though not necessarily will – become aware of what I do, so that competence becomes understanding: that is, ontology turns into epistemology. This is the thesis I demonstrated in my chapter (entitled “Il colore dei soldi”, “The colour of money”).

Conclusive remarks on the symbolic social object, between intentionality and documentality

In the last and conclusive essay of the book, I trace the main aspects of the theories on money presented by Searle and Ferraris. It is entitled *La cornice e l'oggetto sociale simbolico. Il denaro tra intenzionalità e documentalità* (*The Frame and the Symbolic Social Object Money Between Intentionality and Documentality*). Following, some extracts from my chapter.

The challenge of the present book is to look at money in a different way, through the theories of two paradigmatic figures of the international philosophical landscape, John Searle and Maurizio Ferraris, addressing a central topic within social ontology. The task was not easy, but it has been accomplished. The outcome (as was to be expected from great experts in ontology) is that money is not exceptional compared to society, language, or human life in general. The frame is therefore only a metaphor of the symbolic system money belongs to. Money emerges from it as a tool that *works* through language while putting it into question, *operates* through social relations while defining them, and *shows* paradigmatically why and how exchange, as a fundamental social fact, works.

Searle discusses two strong theses. The first is that money is a matter of ordinary language. Like any form of exchange, it is a typically human thing, because no other animated being makes use of ordinary language as understood by Searle. Not only is this a system of signs and meanings

(which can certainly be found in many cases in the animal kingdom): it is also something capable of creating status functions. Social objects – like money – all perform certain functions, and the functions exist in relation to the fact that we have assigned some kind of intentionality to the objects of these categories. The existence of these objects is relative to, and dependent on, intentionality and the observer, whereas other objects have a way of life that is not relative to the observer. Mountains, trees, and molecules exist in a way that is not relative to the observer, while computers, cars, and pens exist in a way that is relative to the observer. The functions are always relative to the observer and are such because only the observer can attribute certain functions to the objects.

The second thesis is based on the distinction between the level of objectivity and that of subjectivity (which Searle distinguishes into epistemic level, relating to knowledge, and ontological level, concerning existence). Money is an entity that exists only to the extent that something (ontology) is thought of *as* money (epistemology). The operation that allows for this attribution of value (epistemic level) to something (ontological level) can be applied to anything at all (a shell, a gold ingot, a can of beer, a pair of pants). And this is how the whole social reality is constructed: this operation, called the status function, is what makes it so that what is in the world (a piece of metal, a person in flesh and bones) is promoted to a socially relevant level by being collectively recognized *as* something relevant (a coin, a husband, a professor or a finance officer). Status functions are important because they attribute power over others. However, Searle does not explain *how* they attribute power, although he suggests that power, in his opinion, derives from the persistence of these functions.

Once an object is treated as a coin, it cannot stop being used that way just because collective intentionality shifts that value to another object, such as a hat. If a man is a husband, for him to cease being such it is necessary to go through a long (and painful) bureaucratic procedure made of registers, archives, files, and signatures: in other words, it is necessary to go through the document system that until then has ensured the persistence of that status. This is a sort of material, physical and traceable mark of the intention expressed on the wedding day (“I do”, in the sense of “I have pictured it”, “I understand it”, according to the most complete meaning of intentionality).

The Latin term *status*, in my opinion, is the first element linking the two philosophers: it is understood in the sense of *remaining* firm, *sticking* to a position and *keeping* balance. The intentional dimension, central to the thought of the American philosopher, has to be very solid for the function of money not to be ephemeral, that is, for money to be more than barter (a sort of peer to peer exchange, a possible ancestor of bitcoin). Money as a status function is created through the constitutive rule “X counts as Y in C”: the object X acquires the function, the exchange value Y, within the context C. This constitutive rule provides reasons to act and

conditions our desires regardless of our inclinations.

Ferraris explains how this is possible. While acknowledging the importance of intentionality in the philosophy of money and in social ontology as a whole, he investigates *how* money is able to mobilize us (and not just *why*, as Searle does). The result is that both of these readings place money at the center of our society because money is a paradigm of its functioning: it increases our power because beyond the form of the object (the coin, the banknote, but also more broadly the bank account, the bank itself, and so on up to the International Monetary Fund) there is the force of the object. Money is an allegory of the human bond, even though it exists independently from the dimension of the bond in the traditional legal sense. This allegory incorporates the exchange of exchanges and therefore, at a closer look, the whole society.

Like Searle, Ferraris also reveals something, solving some puzzles concealed in what he calls the “deep structure” of social reality. Actually, in this case, rather than something that seems to be what it is not (deceit), this is something we are just not used to thinking about, or at least not enough. The deep structure is a system of recordings: a network of documents directly related to intentionality but, according to Ferraris, prior to it. Otherwise, he claims, the great financial crises of history could not be explained. If intentionality preceded documentality in time and importance, great depressions would have been avoided by shifting collective intentionality onto another object. The intermediate conclusion is that there must be a further system of elements in the construction of social reality for functions, values and status to be able to persist and have a recognizable value over time.

The mystical foundation of deontic power mentioned by Searle cannot be (only) collective intentionality. It certainly cannot be the prime foundation of the value of money and of all the things that, by the virtue of their value, make us act. The foundation of the deontic power of money is, in my opinion, the transition from an object’s regular function (whatever it is) to its status function: The object, thanks to the status function, is registered as an object of exchange. Inscription is therefore a core in which the intention coincides with the trace, and only a new trace can modify it. The element of mysticism emerging from the idea of deontic power mentioned by Searle lies in identifying the origin of that power with an almost transcendent force: something makes us act through money, but it still unclear what. The element of mysticism is revealed in Ferraris’ theory.

Money exists in between the two positions. This is also confirmed by Searle’s constant reference to the necessary representation of the status function, without which the function would not take place nor could persist over time. Searle admits that the bank keeps a register, whose only physical form lies in the magnetic traces on the computer disks recording the amount of money one owns in the bank. Therefore, changes in the amount of money owned consist entirely of changes in its representation

on the computer disks. Without things being fixated in a representation (which is an inscription, a sign, a trace) and without a document system that organizes the exchanges, the function of money, both in use and in trade, could not persist.

The inscription that enables the status function and keeps it valid for the object-money unites two elements: the concrete material object and its transcendent value. That is why I think, like Simmel, that money is purely symbolic (Simmel, 2004: 144). The power of money is deposited in the relationship between individual intentionality, collective intentionality, and documentality: this power has a symbolic root. The intention to establish a status function in that object is fixated by the inscription and by the collective recognition of that object as money. The coin, the banknote, the trace on the bank account are individual instances repeated an incalculable number of times, and yet every single time they are more than a piece of iron, a simple piece of paper or a set of data in computer memory. More precisely, a coin is both a simple piece of iron and the value of use and exchange that transcends it. The latter is based on collective intentionality and on the need for it to be fixated on repeatable recording systems (iteration is one of the characters on which Ferraris rightly insists).

These philosophical arguments consider money as a usable good, one that has value according to its numerical indication: it does not matter to have this or that banknote in your pocket, but to have one that has *that* value. In Roman law the usable goods are *res quae pondere, numero, mensura consistunt*: those that can be easily replaced with others, as they have the same quantitative and qualitative structures. Their fungibility, however, always falls within a genre, a group whose limit is defined and known. The fixation of this defining limit occurs on the dual level of documentality and intentionality. The ontological dimension intersects the epistemological one in an ambiguity that can be found in money and in many other objects: Ferraris rightly notes that bitcoins are the most concrete form of money (Simondon, 1958), as they are simple silicon recordings. The intangible concreteness of the bitcoin is given by its recognizability as a social object that is constituted as a *symbolon*, an amulet in which the individual instance coexists with the value to which it refers. It is a symbolic and reproducible social object, which is based on a document basis animated by collective intentionality.

In this symbolic foundation, money refers to the system of norms that hold society together: the deontic power of money and of norms cannot be self-founded, but needs a foundation (Zagrebelsky, 2012). Ferraris notes that collective intentionality is nothing more than a fiction by which we can say that every gesture, every decision and action, is not arbitrary or subjective, but belongs to a network of relationships and reciprocal recognition among subjects. For this reason, once again, money is first and foremost a power: owning it allows one to create potential constraints where they do not already exist. This potential obligation to

others and to another collectivity, which we may call “society”, is what makes us act in the respect of rules and what makes us recognize a given object as currency and a given individual as the President of the United States.

The peculiarity of money is that any recording (but not any volatile object) could be money, as Searle notes, but not all objects are used as money, as Ferraris notes. The recording (and therefore coming into existence) and iteration of money have meant that it has slowly become a technically defined object, produced only in some places and in some ways; it can also be transferred virtually, but always through some very precise means. So, money is a *unicum* whatever, so to speak: being the outcome of iteration, it can be found anywhere, but is an individual bearing a universal and widespread value.

Money is a symbolic social object because it is “a place of referral that presupposes a double layer of reality: one that lies beyond the factual and logical-demonstrative experience, which is, as it were, hidden behind a veil, and the one that the veil itself shows us, in the approximation [...] of disclosure and concealment” (Zagrebelsky, 2012: 6). Like any symbolic object, it is also intrinsically enigmatic and deceptive, because not everything about money can be understood through perception, and because what intuitively seems clear may be wrong – as Searle rightly notes in his analytic deconstruction. In the banknote displayed by Jefferson Hayman and in every banknote in our wallet, there is a form (the visible one, the image) and a force (the invisible one, the theme or the content). For this dual nature, money is a symbolic social object that responsabilizes us and creates power.

In his seminal work on money, which has proven able to constitute a total philosophy, Simmel claims that: “the unique significance [of] exchange [appears] as the economic-historical realization of the relativity of things [...]. No matter how closely the inner nature of an object is investigated, it will not reveal economic value which resides exclusively in the reciprocal relationship arising between several objects on the basis of their nature. Each of these relations conditions the other and reciprocates the significance which it receives from the other” (Simmel, 2004: 99). It is a relation of reciprocity that, without simplifying them, brings together documentality and intentionality and now appears to me as it did at first: an ambitious dialogue that, for this reason, involves many disagreements (all well-supported) and is able to look at the overall complexity of a theme normally relegated to economic theory, be it explanatory or radically critical. Money is thus brought back where it truly belongs: to the field of the theory of exchange. And therefore to the origin of human relations and of the system of social objects that surround us, affecting us aesthetically and intellectually. From the color of money to the theological matrix of the trust we have in it (Napoli, 2016).

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Design Construction Networks

Who Builds Your Architecture? (WBYA?)

Abstract

This visual essay diagrams a global design construction network that connects architects to migrant construction workers in a direct line. A hypothetical stadium construction site lies in the center; one side maps the movement of a steel truss from design to fabrication to a building site; the other side charts the path of migrant workers as they travel from villages to this construction site. Detailed scenarios outline the work of different actors on both sides, and additionally highlight challenges faced by migrant construction workers and where solutions might intervene. By connecting architects and workers the essay points to visible as well as sometimes hidden economies of architecture, and asks: What are the architects' ethical responsibilities towards those who erect their buildings around the world? The essay further opens up a theoretical trajectory that seeks to understand the underlying and often unequal systems that structure today's architecture and construction.

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1 - WBYA? is

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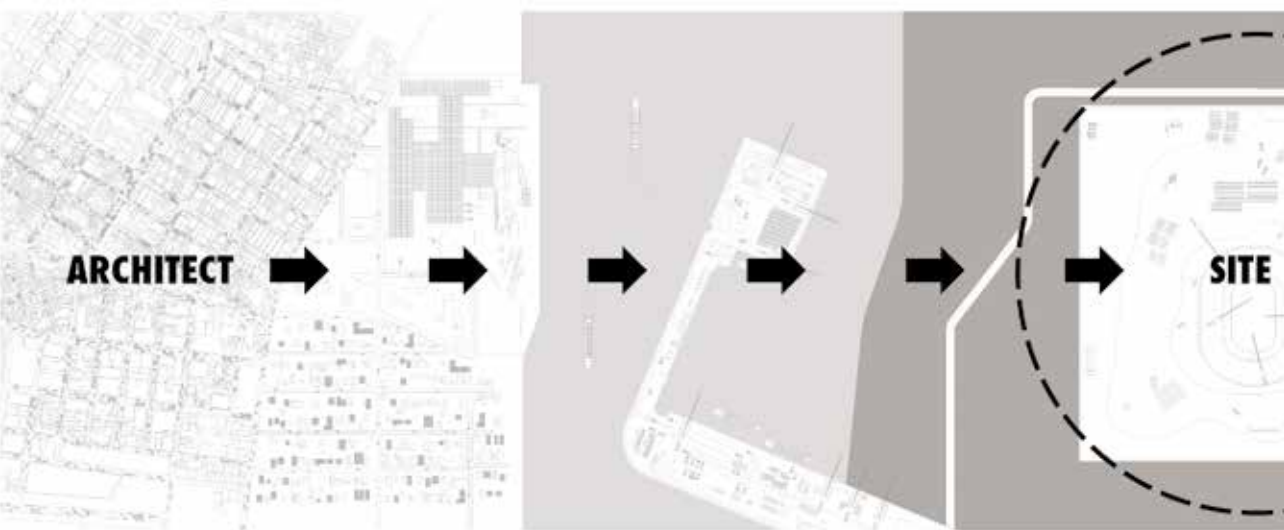
Global capitalism has expanded the scope and scale of the building industry to form an expansive supply chain – a vast network of manufacturers, suppliers, and builders whose operations are aided by digital technologies and facilitated by transportation systems connecting most regions of the world. It employs an array of actors linked via legal and professional relationships – architects, construction managers, engineers, contractors, consultants, clients, financiers, and construction workers. This has led to the atomization and dispersion of fields related to the design and construction of buildings, and the proliferation of contracts and agreements that bind them together, or separate them, with additional underlying exploitative practices that exist outside or within these expansive networks.

Since the 1970s, the liberalization of economies has propelled the movement of capital and labor to new markets around the world. These globalized connections of production have spawned economic lifelines, as families and home nations depend upon the remittances sent back by legions of migrant workers. As the number of workers seeking employment in other parts of the world has increased exponentially, so has their exploitation and abuse through predatory recruitment networks and unsavory employers seeking to maximize profit by reducing wages and expanding work hours. The construction industry has taken advantage of these labor trends by contracting seasonal and short-term workforces from abroad – a labor procurement practice ideal for the one-time-only, site-specific nature of building projects. Migrant construction workers often face unscrupulous conduct by recruitment firms, subcontractors, and local authorities – each jockeying to extract a bigger cut of the workers' salaries. Within the vast global supply chains and complex building processes, architects and migrant construction workers end up at the opposite ends.

In this visual essay, we diagram a design construction network that connects architects to migrant construction workers in a direct line through a construction site. A hypothetical stadium construction site somewhere in the Middle East is in the center; the left side maps the movement of a steel truss from design to fabrication to a building site; and the right side charts the paths of migrant construction workers as they travel from their villages to job sites. In the following pages, descriptive captions include challenges faced by migrant construction workers as well as speculations on where solutions might intervene. By connecting architects and workers the essay raises critical questions, such as: What are the architects' ethical responsibilities towards those who erect their buildings around the world? Where do these construction workers come from, where do they live and what does architecture demand from them? How do new technologies transform construction methods as well as communication? Or workers' rights? Or site oversight? How can architects promote fair labor practices?

Along with these questions, the essay also opens up a theoretical trajectory, as these diagrams of the construction site and its supporting spaces

can be filled in with research about the work conditions on specific job sites and the practices of particular architects, engineers, construction management companies, and sub-contracting companies. Alternatively, it can be understood through more abstract models that do not include the specific names of various entities, but rather use defined labor roles to understand the system that structures today's construction process. In architectural theory and history we have not yet fully researched and understood the far-reaching impact of globalization on construction. How, then, might we bridge this perceived split between the discipline of architecture and the global systems that shape the day-to-day conditions of the construction site? Over the past few years, Who Builds Your Architecture? (WBYA?) has organized workshops and public forums, taken part in panels and lectures, developed visualizations and maps, and written essays to probe and understand a complex set of relationships of architects and architecture in the global construction industry. WBYA? has examined links between the labor of architects, contractors, subcontractors and construction workers in the context of the processes of building within the global supply chains of the construction industry. Forums such as biennials and publications have provided a platform for our research. These spaces have helped to advance the work but have also made us aware of the need to initiate wider dialogue about the role of labor in architecture in schools, in architectural offices, and on construction sites. In what type of space might we imagine a conversation taking place between an architect, construction manager, construction worker, and historian? Would the conversation take place in an office, or a school, or an installation, or on a construction site? What sort of questions would be raised? And how could such a conversation become the grounds for a collaborative process that recognizes and protects the dignity of all forms of labor?



Architects in offices in global cities design steel trusses for a stadium project abroad.



Structural engineers work with the architects to further develop steel truss details for installation on sites abroad.



A factory manufactures the steel truss per specifications by architects and engineers.



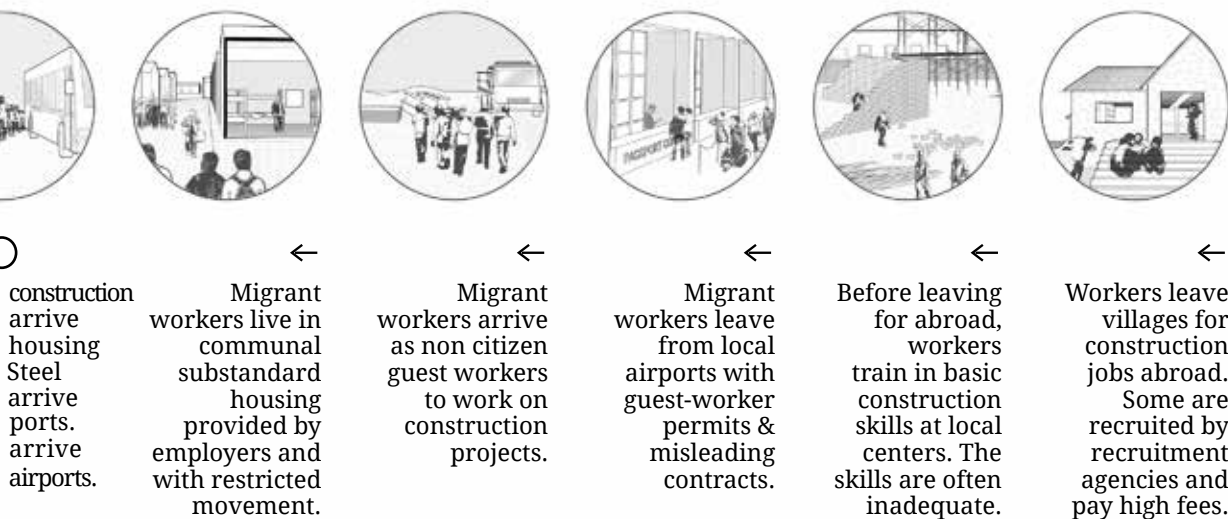
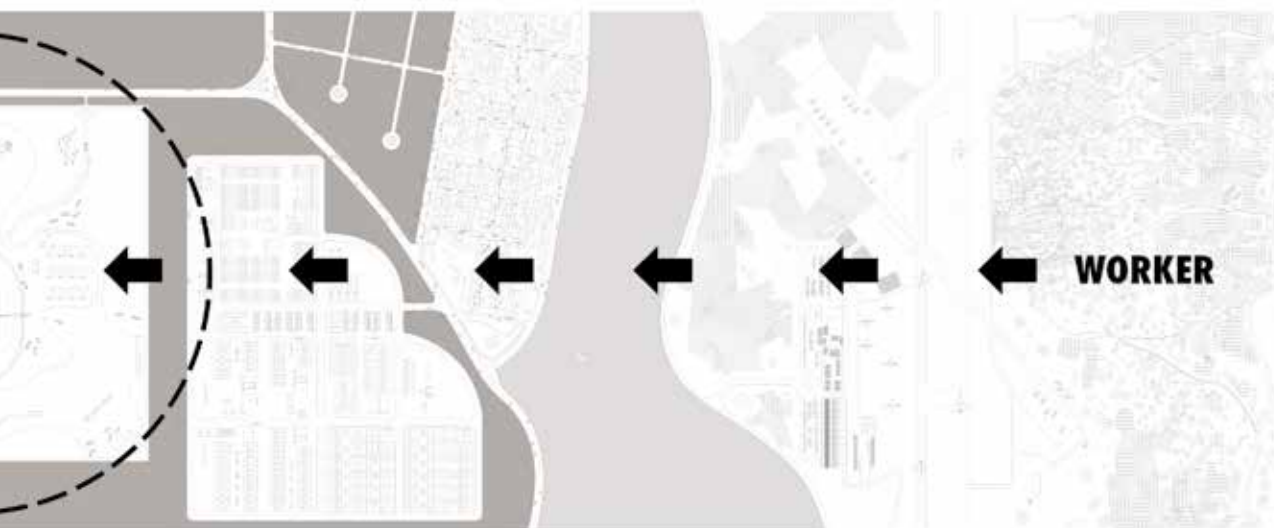
Manufacturers ship steel trusses to job sites. Port workers load and unload the containers in different countries.

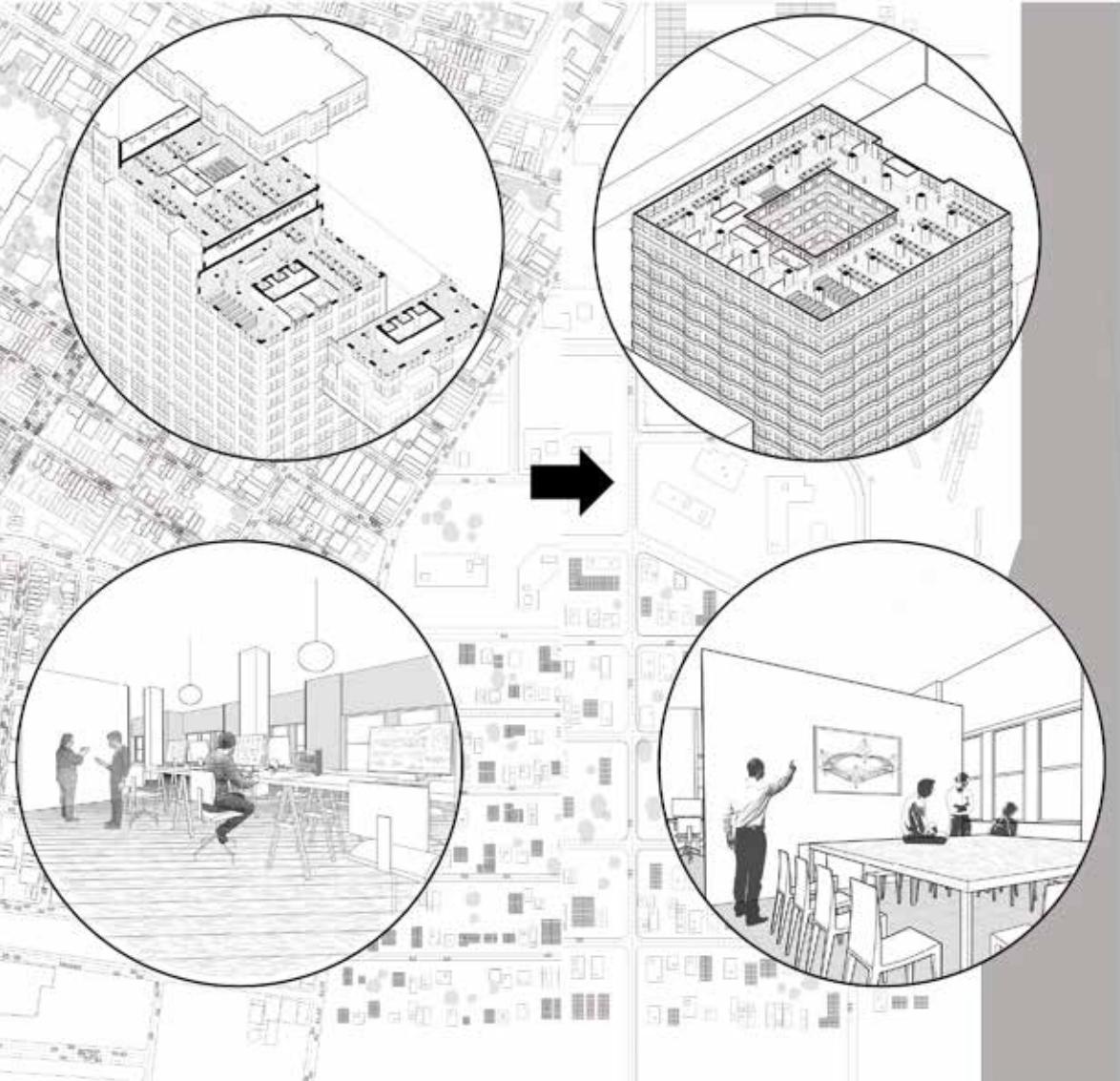


Steel trusses arrive via shipping container to the port. All goods clear customs and requisite national tariffs.



Migrant workers from the camps. trusses from Architects from





TEAMS OF ARCHITECTS DESIGN A STEEL TRUSS FOR A STADIUM PROJECT IN A MAJOR INTERNATIONAL CITY.

Architects design building components, prepare specifications describing each detail, material, and skill required for construction. Architects belong to professional associations, like the American Institute of Architects, but not unions. Working conditions and wages are not standardized across architectural offices. Some firms outsource the production of construction documents to countries where labor costs are cheaper.

National and international professional institutes should renew code of ethics that promote fair labor for all workers.



THE ARCHITECTS WORK WITH STRUCTURAL ENGINEERS DEVELOP DETAILS FOR THE STADIUM'S STRUCTURAL SYSTEM AND BUILDING COMPONENTS.

Large international building projects require specialized labor on all levels. The knowledge required for constructing a large building project is divided across a wide spectrum of experts during a design's development and construction phases. Architects collaborate with structural, mechanical engineers or other consultants, who are often based in other countries, but rarely with human-rights experts or social scientists.

Project teams for global architectural projects should include regional experts that can advise on local human-rights and labor issues.



BEFORE LEAVING FOR THEIR JOB IN ANOTHER COUNTRY, WORKERS TRAIN IN BASIC CONSTRUCTION SKILLS AT LOCAL VOCATIONAL INSTITUTIONS.

Workers travel from their homes in rural villages to cities where they receive skill-based instruction at training centers. This basic training may prove inadequate for the type of labor the worker will eventually be required to do on foreign construction sites. At training centers, workers are often provided with minimal information about what to expect of the working and living conditions abroad.

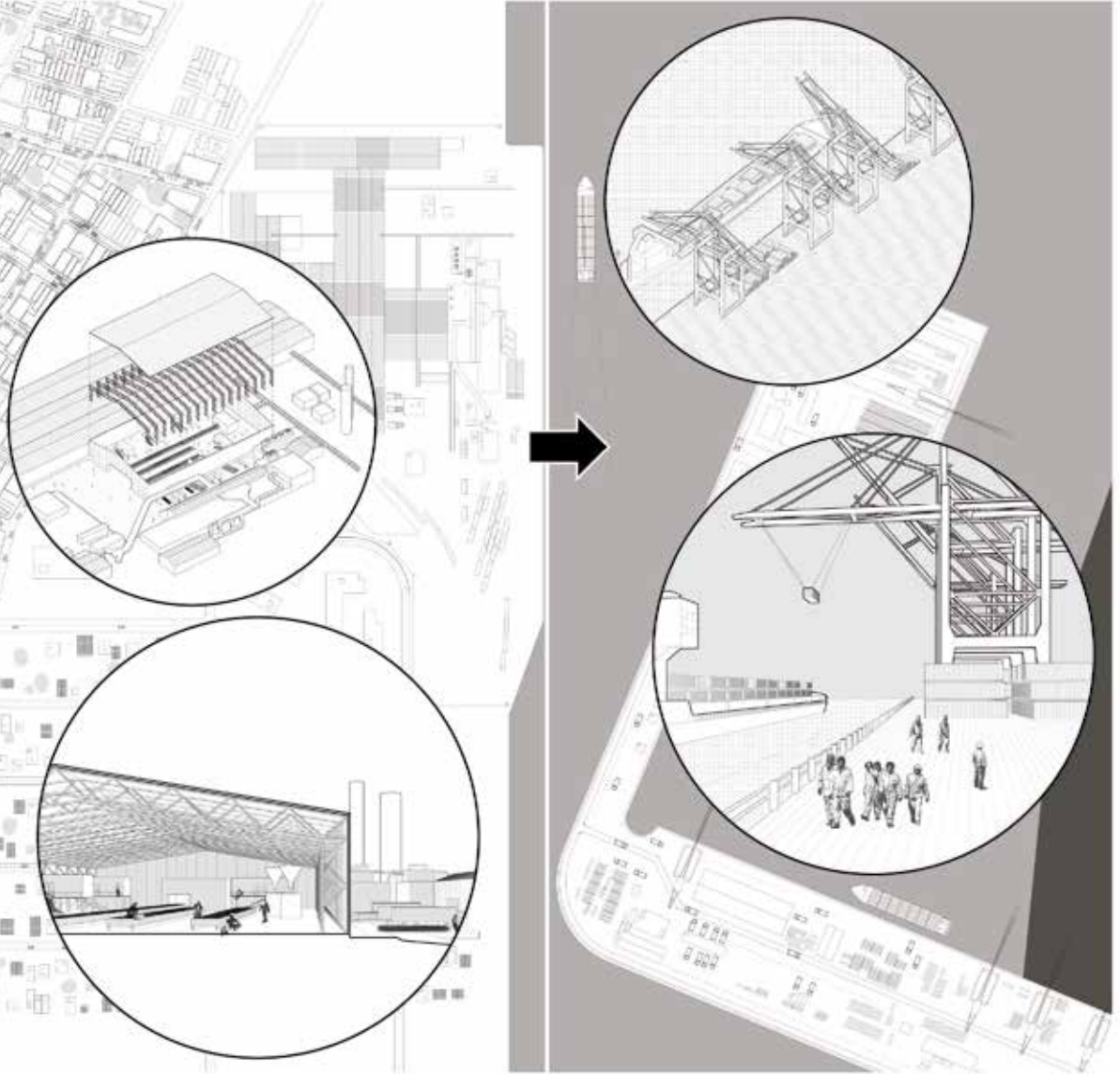
Architectural drawings and documents can become vehicles to train workers and to raise labor standards in construction practices.



WORKERS LEAVE LOCAL VILLAGES FOR CONSTRUCTION JOBS ABROAD.

Before they migrate, workers often live in rural villages. Sending money from abroad in the form of remittances will help support their families. Workers secure employment through recruitment agencies that charge fees, often loaned against future wages at high interest rates. Fees must be repaid even if a worker is not paid by the employer, is injured on the job site, or dies while abroad.

Recruiting practices should be reformed. Project financing should include economic sustainability for all workers.



A FACTORY MANUFACTURES THE STEEL TRUSSES AND TRANSPORTS THEM TO THE SENDING PORT FOR SHIPPING TO THE CONSTRUCTION SITE.

Engineers and architects might work with specialists employed by the manufacturer to determine how the steel truss may be produced or assembled. Most often, these discussions are limited to technical details and not procurement, labor or ethics. Workers at the factory manufacture the trusses. Line workers at these factories may or may not have their wages and working conditions protected by unions, as fair labor practices vary from country to country.

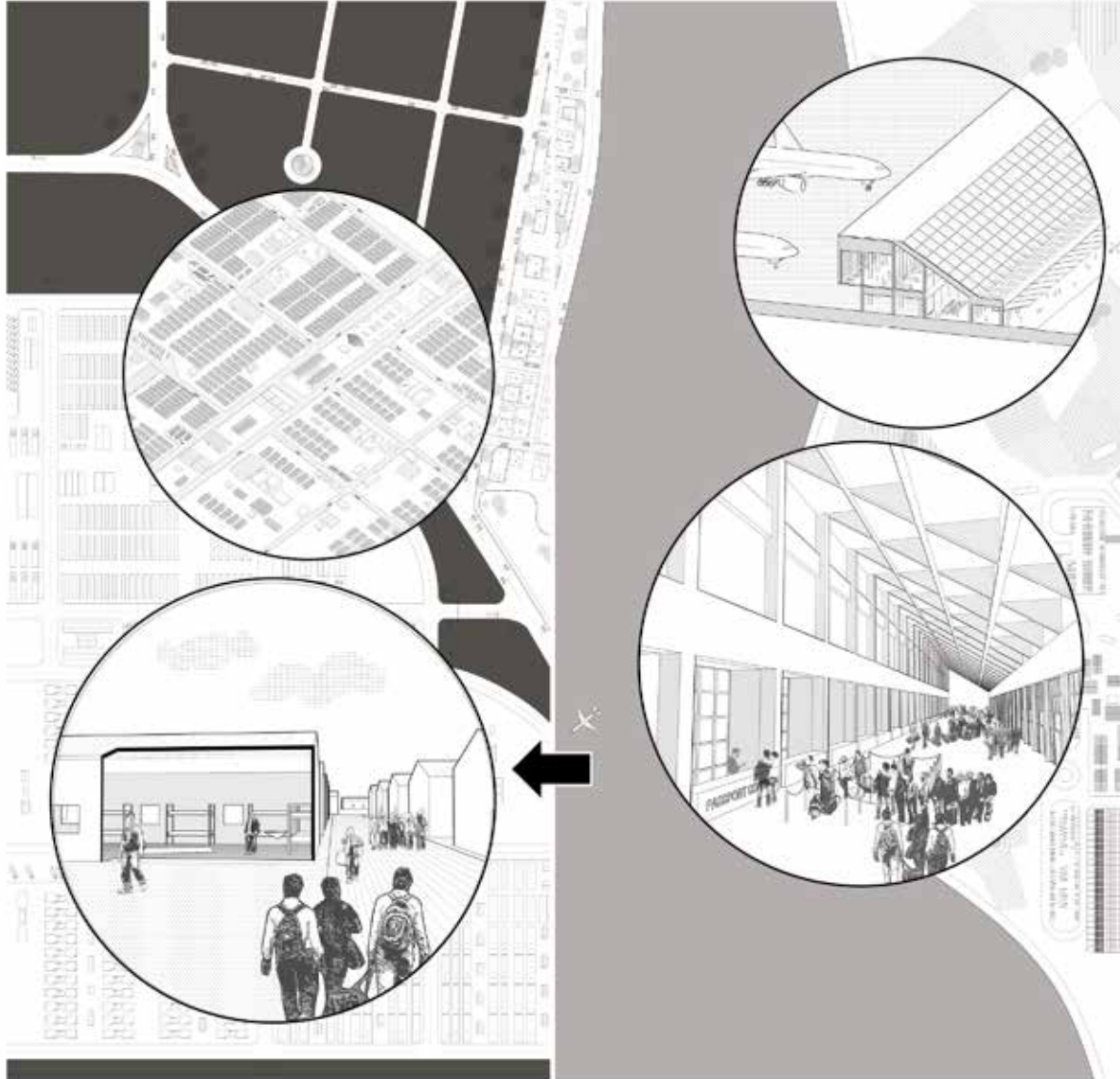
Architects should use new technologies to link design, construction, and labor supply chains.



STEEL TRUSSES ARRIVE VIA GLOBAL SHIPPING CONTAINERS TO THE PORT NEAR THE CONSTRUCTION SITE.

Manufactured building components must be shipped internationally because factories are usually not located in the same country as the building sites. Port workers unload containers carrying the trusses and other materials onto the docks. Over the past 50 years, mechanization and containerization have greatly reduced the number of port workers. All containers must clear customs review and pay any requisite national tariffs.

Create knowledge-base for global trade systems in relations to the design and construction industries.



MIGRANT WORKERS ARRIVE TO THE COUNTRIES WHERE CONSTRUCTION PROJECTS ARE LOCATED.

Workers' passports are often confiscated upon arrival, and only some receive local identification cards. Newly arrived workers are shuttled to workers' camps where they sleep in single-sex rooms that are often overcrowded and may lack access to proper kitchen, sanitation, and toilet facilities. Some camps are located far outside of city centers, or workers may be housed in the unfinished buildings on the construction site. Workers may not receive regular payments, and in some countries, they are not be able to unionize or protest lack of rights or poor treatment.

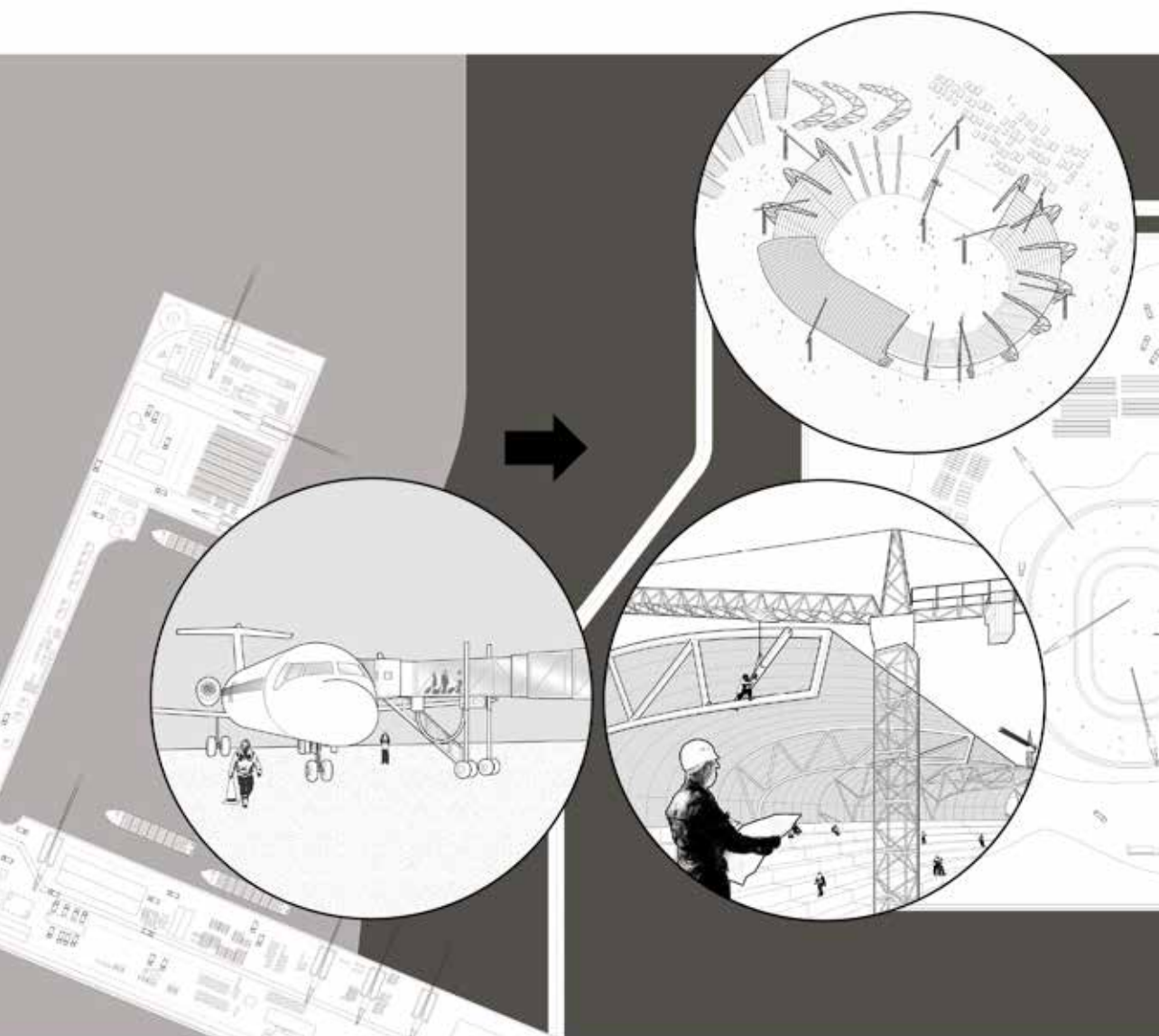
Architects should work to improve living and working conditions of all construction workers.



FOR MIGRANT CONSTRUCTION WORKERS, THE LOCAL AIRPORT SERVES AS THE DEPARTURE OR CONTROL POINT FOR THEIR NEXT ROUTE OF PASSAGE.

Brokers use part of the recruitment fees to buy airline tickets and visas for workers. With an increase in the number of people seeking employment in other countries, airports have opened separate passport control lines for migrating workers. National agencies have often used airports as sites of control, and to regulate employment and economic opportunities for low-wage workers.

Understand how decisions are made from design to construction, understand who benefits and at what costs.



ARCHITECTS ARRIVE FROM AIRPORT TO THE CONSTRUCTION SITE TO OBSERVE AND INSPECT THE BUILDING PROGRESS AND DESIGN EXECUTION.

Architects and engineers schedule regular site visits. They meet with on-site construction managers and contractors about the execution of the different phases of construction. Often, they have no direct contact with workers doing the labor of building on the construction site. Forepersons work with construction documents and specifications created by the architects and engineers to supervise workers and to communicate or coordinate work at the job site.

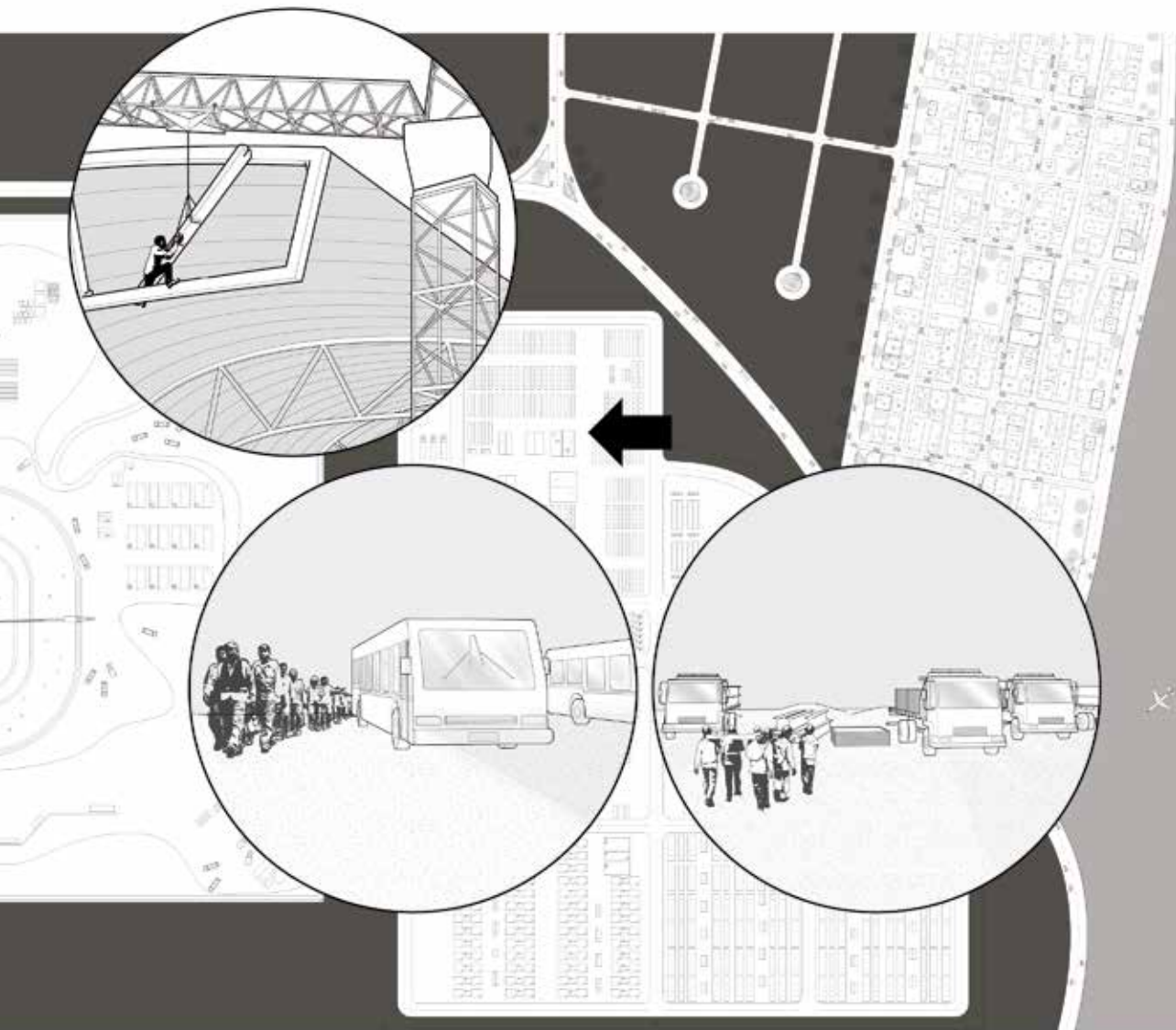
Determine where abusive labor practices occur and refuse to work with contractors or subcontractors who mistreat workers.



STEEL TRUSSES COMPONENTS ARRIVE FROM PORT TO THE CONSTRUCTION SITE TO BE INSTALLED IN THE BUILDING STRUCTURE.

Truck drivers deliver building materials, particularly those imported from abroad, to job sites according to the different phases of construction. The installation of some components requires workers with specific skill sets. Compared with unskilled workers, skilled workers are typically better trained, receive higher pay, and are much more likely to belong to unions.

Use architectural drawings and documents as a vehicle to raise labor standards and improve construction practices.



MIGRANT CONSTRUCTION WORKERS BUILD PROJECTS DESIGNED BY ARCHITECTS.

Migrant workers follow directions from forepersons to construct buildings as designed by architects. Because of the diversity of immigrant workers, forepersons might speak as many as 6 languages. Workers do not typically interact with construction managers, architects, or engineers. They are often required to provide for their own safety equipment, including hard hats, eye protection, gloves, work boots, and safety vests. They are often trained on site for complex construction techniques or to perform work with new materials.

Design construction sites to include safe conditions, rest and public spaces for construction workers.



MIGRANT CONSTRUCTION WORKERS ARRIVE FROM WORKERS' CAMPS TO THE CONSTRUCTION SITE.

Migrant workers travel from their camps on dedicated buses for shifts on a rotating work schedule that can operate 24 hours a day. Due to the lack of sufficient training, workers may face difficult tasks or unsafe conditions. On some sites, they can be made to work extended shifts without regularly scheduled breaks. Some jobsites are far from city centers and do not include any public spaces. With their status as non-citizen guest workers, they may not be allowed to unionize or protest unfair labor practices.

Broaden scope of site observation to include the recognition of abusive labor practices at construction sites and at workers' housing.

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How to Design Housing for the Poor?

Petar Bojanić

Abstract

In the second half of the 19th century, poverty is above all an urban problem. How do the first modern urban planners imagine the struggle against poverty, and can ‘wealth be in the service of the workers and the people’? Primarily using two Reports, John Locke’s 1697 *The Report on the Poor* and *A Philosophical Review of Poverty* (Wolff, Lamb, Zur-Szpiro) from 2015, I intend to explain and determine relative and absolute poverty, ghetto, the dark ghetto (Shelby), the suburbs, slums, ‘worker cities’ (Cités Ouvrières), the ‘social palace’, etc.

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What is poverty and how could we design housing for the poor today? Are the Roma, the *sans-papier* or migrants poor because they have no permanent dwelling place? Is it possible to design housing for those who travel or those who do not wish to dwell in one place or those who dwell together only temporarily? Who are we, the ones who dwell without the poor? If someone *has* an apartment (what would 'having' an apartment mean, and does 'having' have anything to do with dwelling?), does this mean that their poverty has ceased to be? All these questions show, perhaps, that poverty no longer resides among those all too rarely mentioned as the poor – workers, who usually have unstable and temporary jobs but live in a given place. It is as if the category of worker with temporary residence, those who work 'under the table', which for a long time functioned as a pseudo 'stand in' for the poor worker of the 19th century, has been replaced with new figures of the precarious poor. What kinds of apartments do the precarious need and how should they dwell? Reading various texts in various languages regarding poverty and the poor, it is becoming clearer to me that war and violence above all create and consistently maintain a 'poor group' that is supposed to somewhere, somehow build something (such as a group of migrants working together, attempting, a long time ago, in Babylon, to incorporate). Or else they constitute a group that ought to be pushed out to the periphery of a city, placed outside a city (how can a million migrants build apartments for themselves in Germany? Where? Will this work be what turns them into German citizens?), or a group that becomes either dispersed or is compressed into a ghetto or a 'city of refuge', etc.¹ If this is indeed our main problem today, and if we put aside that what is going on with workers in China corresponds with the terrible conditions of life and work in the West in the 18th and 19th century, then these issues would belong to a single family designated by phrases such as 'social equality', 'poverty (relative or absolute)' or 'marginalized group'. The thematization of these problems at present, which Jonathan Wolff designates as *the* task of 'real world political philosophy' corresponds to what Marx in the *Grundrisse* (1858) (entirely consistent with the Rawlsian spirit) calls 'general intellect' (even in the German original the phrase is in English), that is, 'social practice' or 'real life process'.

Before I return to Wolff, and then Engels (and his large text 'Zur Wohnungsfrage' from 1872), I should mention two, almost complementary pseudo-projects from different epochs that add to the problem of poverty something that is in our day and age always latently present.² The first is *Draft of a Representation, Containing a Scheme of Methods for the Employment of the Poor* (or *The Report on the Poor*) by John Locke from 1697,³ in which he seeks a profound reform of social life. The second is Hegel's consideration of poverty in the context of civil society that necessarily produces it (from his lectures on the philosophy of right).⁴ Locke is excited by the statistical analysis published by Gregory King in 1696, which showed a 25% rise in the number of poor, and that despite the *Act of Settlement* from 1662, 50% of the population was poor. In brief,

1 - At this year's Venice Biennale, the German pavilion carried an exhibit entitled 'Making Heimat' with the explanation that Germany hosted some 12 to 15 million Germans expelled immediately after World War II from other European countries where they lived before 1945. Urban settlement models from the fifties were offered as examples of solutions for current problems of resettling refugees in Germany. There is nothing cynical in today's refugees building their *Heimat* in Germany, given that this country has a shrinking population. The problem lies in demography still being strictly tied to sovereign states and not with Europe.

2 - Ostensibly, there is really nothing problematic about poverty in Adam Smith's or David Ricardo's liberal theory. In *Theory of Moral Sentiments*, for example, Smith reiterates the analysis of Mandeville (*Fable des abeilles* [Fable of the Bees], 1714), regarding

the necessity of great spending by the rich to ensure work for the poor. Ricardo, meanwhile, offers few arguments against poor laws and insists that they be entirely abolished.

3 - It is now possible to deliberately connect this Report or memorandum Locke writes in his capacity as Commissioner on the Board of Trade with something entirely different, but nevertheless concerns England: *A Philosophical Review of Poverty* (Wolff, Lamb, Zur-Szpiro, 2015), which appeared as part of anti-poverty strategy of the UK, financed by the Joseph Rowntree Foundation (Joseph is the father of Seebohm Rowntree, the author of the famous *Poverty. A Study of Town Life*. Both father and son were Quakers.)

4 - John Rawls noted this passage in his *Lectures on the History of Moral Philosophy* (Rawls 2000: 345ff). He concludes that Hegel does not have

a solution for the problem of poverty or that it does not fit into his system (which, when it comes to Hegel, is in itself impossible and entirely paradoxical). Rawls there refers to a few pages from Allen Wood's book *Hegel's Ethical Thought*.

Locke is looking for a way to put to work vagrants and saboteurs, whose number, despite stricter penalties, was ever greater – because only those who work will eat, drink, be clothed and sheltered (the age at which both boys and girls begin their working lives at this time is fourteen).⁵ Locke is *de facto* inventing punishments and strategies for the successful functioning of workhouses, opening all over England at the time.

Just like Locke, Hegel will construct a kind of group identity for the poor (although not only for them), ascribing to them a dangerous, generally unknown and inexplicable role. What is significant is that Hegel recognizes that a) civil society excludes many others (not only women, for example), which is entirely unjustified and inexplicable: ‘The emergence of poverty is in general a consequence of civil society and on the whole arises necessarily out of it’ (Hegel, 1983b: 193).⁶ Further, he insists that b) charity is no solution to the problem of poverty, opposing to it the solution in place in Scotland, where they sought ‘to leave the poor to their fate and direct them to beg from the public’ (§ 245). c) Probably under the influence of Adam Smith, Hegel becomes a ‘real world political philosopher’, preferring social analyses he reads (mostly) in English books and newspapers, to his own speculative constructions. d) Hegel is perhaps the first to recognize that the poor are excluded ‘from the spiritual benefits of modern society, from education, even from the consolation of religion’. Finally, e) Hegel concludes, introducing the moral degradation of the poor, that no entity, not even the state can resolve this problem (Hegel takes it as axiomatic that the state is immanently present in civil society). Here is Hegel:

The poor man feels himself excluded and mocked by everyone, and this necessarily gives rise to an inner indignation. He is conscious of himself as an infinite, free being, and thus arises the demand that his external existence should correspond to this consciousness (Hegel 1983b: 195).

Poverty in itself does not reduce people to a rabble (*Pöbel*) [this is the passage quoted by Rawls]; a rabble is created only by the disposition associated with poverty, by inward rebellion against the rich, against society, against the government, etc. (§ 244)

The ‘rabble’ is characterized by ‘envy and hatred against all those who have something,’ as well as laziness and the right to live by the work of others. ‘The rabble is a dangerous [social] ill, because they have neither rights nor duties’ (Hegel, 1973: 322). Finally, Hegel reverses himself and relativizes the link of poverty and the rabble, insisting on an entirely new point: the ‘rabble [is] distinct from poverty; usually it is poor, but there are also rich rabble’ (Hegel, 1983a: 608).⁷ This last point of turning the rich into the rabble (for example, a kind of *nouveau riche* who has all the characteristics of a poor person ‘who hates all those who have something or have more than him’) could be an example of the transformation of absolute into relative poverty, which often depends only on context and comparison with others.⁸

5 - 'He who does not work - does not eat' is a cliché repeated by apostle Paul, the utopians, the Quaker John Bellers, Locke's contemporary, who reminds his readers that in China literally everyone works (the feeble-minded, the blind), etc.

6 - 'When there is great poverty, the capitalist finds many people who work for small wages, which increases his earnings; and this has the further consequences that smaller capitalists fall into poverty'. (Hegel 1983a: 610)

7 - Many of the lines quoted here have already been translated into English by Allen Wood.

8 - It is comparison with others that turns the poor into rabble, allowing them to be recognized or connect with those similar, and then potentially be categorized as part of a group whose constitution is never completed (for the rabble is never a group, but a mass of people that lives in

pre-corporate or pre-institutional space). There is a passage in *Leviticus Rabbah*, where the English translator, Jacob Neusner, attempts to differentiate a few characteristics of the poor: 'Seven names were given to him [the poor]: poor (*anī*), impoverished, despised, dispossessed, denuded, crushed, and lowly. 'Impoverished' because he desires everything. 'Despised' because he is held in contempt by everybody (...) 'Dispossessed' because he is disposed of all his property. 'Denuded' because he is denuded of all his property. 'Crushed' because he is crushed. He sees something to eat but does not eat it, sees something to drink but does not drink it. 'Lowly' because he is lower than anyone, like the lowest threshold'. (Neusner. 1997: 226-227) Cf. Shalom. 2011: 43-44.

Hegel's conceptual theater (to be sure, Hegel is not alone, I use him as an example) carries at least three quasi-opuses of problems always present in the case of 'poverty' and the poor. The first concerns the general problem of description and evidence of the existence of the poor and poverty, sometimes even testimony and experience of one's own indigence or poverty of others (as if poverty must be felt; or that, for example, the smell of a French or Russian vagrant is not the same; and the question of how to detect, explain, and produce motives for the construction of action or productive social action?).⁹ The second refers to differences, levels and gradations of poverty (a problem probably unwittingly opened by Seeborn Rowntree at the turn of the 20th century). The third refers to the group or pseudo-group of the poor. And only at this point does the issue of housing appear – the poor is such because of lack of dwelling or permanent residence (the politically correct acronym for the homeless in Paris is SDF, '*sans domicile fixe*' [without permanent residence]); but at the same time, the poor dwell huddled, in groups, together, in blocs. The study produced by Seeborn Rowntree and his associates in 1901¹⁰ includes two thirds of the population of York, or some 46,000 people. They excluded 'those individuals who were able to afford to employ a domestic servant' (such criteria make matters more complicated, since the proportion of the population of the Italian city of Udine, for example, in the same year who can employ a domestic servant is certainly much smaller than in York, which does not necessarily speak of poverty in Udine, but of culture of dwelling in York; and let me be upfront that I do not know what a 'culture of dwelling' would be). Rowntree's book, *Poverty. A Study of Town Life* shows that 20,000 people in York live in poverty, while 28% live in 'most serious poverty.' In the introduction, obviously written when the book was already finished, precisely because of its research result, the author explains:

As a primary object of my inquiry has been to ascertain not only the proportion of the population living in poverty, but the nature of that poverty, I have divided the population so living into two classes:

- a) Families whose total earnings are insufficient to obtain the minimum necessities for the maintenance of merely physical efficiency. Poverty falling under this head I have described as 'primary' poverty;
- b) Families whose total earnings would be sufficient for the maintenance of merely physical efficiency were it not that some portion of them is absorbed by other expenditure, either useful or wasteful. Poverty falling under this head is described as 'secondary' poverty. (Rowntree, 1908: x)

This pair, 'primary' / 'secondary' poverty, which might have seemed entirely arbitrary a hundred years ago and refers to families and not individuals, has been transformed into the pair absolute / relative or extreme / intermediate (Hennie Lotter), and then further into subsistence / status

9 - Martha Nussbaum speaks of the significance of narration (mentioning Dickens, Thomas Hardy and others) in the course of presenting data, specifically in order to be 'inclined to think of the lives of the poor (especially, perhaps, the distant or foreign poor)'. (Nussbaum, 2012) For example in *Social Equality, Relative Poverty and Marginalized Groups*, when Wolff talks about his visit to the city of Katat-ura, 'a township built 5 miles outside Windhoek, the capital of Namibia', the information that 'Katatura' translates as 'the place we don't want to go' is more significant to the readership than any statistic (Wolf, 2015).

poverty?' (Rowntree, 1908: vii)

10 - In the introduction opening, Rowntree writes: 'My object in undertaking the investigation detailed in this volume was, if possible, to throw some light upon the conditions which govern the life of the wage-earning classes in provincial towns, and especially upon the problem of

poverty, etc. There are another two passages usually quoted to further complicate matters regarding 'secondary' poverty, and which serve to reconstruct poverty or create 'a radical redescription of poverty' (a phrase from Shaw, 1988: 27). The first passage is Peter Townsend's 1979 definition of relative poverty.¹¹ The second is a famous sentence from Adam Smith in discussing the concept of necessities in *The Wealth of Nations*, probably first referred to in this context by Amartya Sen:

By necessities I understand not only commodities which are indispensably necessary for the support of life, but what ever the custom of the country renders it indecent for creditable people, even the lowest order, to be without... Custom has rendered leather shoes a necessary of life in England. The poorest creditable person of either sex would be ashamed to appear in public without them. (Smith, 1776: 351-352)¹²

These examples are not always exactly aligned with the concept of poverty, nor do they correspond well with the intentions of Seeborn Rowntree ('leather shoes' in public are not dissimilar to the institution of 'employ[ing] a domestic servant'). Still, they help in considering poverty as a certain impossibility of participation in the work of a group (a corporation) or simply be part of a group (status, custom). Here we reach the social exclusion of which Townsend speaks. Even if a poor man or woman, for example, participates or thinks he/she is participating in society or in a group, sub-group (Jo Wolff gives an example analogous to that of Smith, citing that citizens of Katutura, on the verge of hunger, nevertheless all have mobile phones), it still does not mean that this whole group is not socially excluded or marginalized.¹³ What is far more important, and this is certainly Jo Wolff's effort, is to defend an elementary definition of poverty as low income compared to capability deprivation.¹⁴ I think that it is not only that poverty is more easily measured this way, but that income already implies the existence of membership and belonging to various groups – in other words, inclusion, connection with society and ties to others. It is not sufficient to have a mobile phone, hold it in hand, play games, and treat it as 'equivalent to Adam Smith's linen shirt' (Jo Wolff). It is necessary to communicate, to speak, to write. Of course a mobile phone in the hands of someone on the streets of Katutura, or in destroyed cities of Afghanistan, is certainly an opportunity and a great chance for them to soon be on the border or a ship, on their way to Munich. If their action is not careful enough, and speech acts are not precise enough (producing and accepting responsibilities 'with those who matter to him or to her'), the poor become migrants who could perhaps join the conglomeration of poor on the peripheries of large Western cities.¹⁵ Even though in this search for a better life, it is possible to see some elements of the first groupings and joint dwelling with members of one's extended family for the sake of common work (i.e. the first forms of incorporating),¹⁶ it is certain that two hundred years after the identification

11 - It is often quoted by Wolff as well as others: 'Individuals, families and groups in the population can be said to be in poverty when they lack the resources to obtain the types of diet, participate in the activities and have the living conditions and amenities which are customary, or at least widely encouraged or approved, in the societies in which they belong. Their resources are so seriously below those commanded by the average individual or family that they are, in effect, excluded from ordinary living patterns, customs and activities' (Townsend, 1979: 31). Shaw comments that 'The abolition of relative poverty seems, in principle, incapable of achievement. For as Townsend has argued, even if societies become wealthier and living standards rise accordingly, the relative poor will always be with us. Rising living standards will increase the proportion of the relative poor whose income does not permit access to all the goodies an

affluent society can provide for its citizenry' (Townsend, 1979: 33)

12 - Cf. Sen 1983: 159. Commenting on this passage, Jo Wolff says: 'Relative poverty is a matter of not having the resources that will allow you to fit in' (Wolff. 2015: 9)

13 - In Pierre Bourdieu's famous book *La misère du monde*, whose great novelty consists in the poor speaking, in that they are interviewed by Bourdieu and his assistants (Wolff, De-Shalit, 2013: 54-55, also speak in detail of an interview with an anti-poverty officer), there are testimonies of a certain married couple Demoura (of Portuguese origin) who have lived a very long time in a small apartment in Paris, without any furniture or drapes, under 'conditions défavorises' (the French translation of 'disadvantaged'), with the state's help. They are happy in France and they consider themselves well integrated in

society. However, when they fall victim to quite rare and complicated illnesses, they suffer great injustices, and realize that it would be much better to have the French name Dupont, rather than Demoura (Bourdieu, 1993).

14 - In Chapter 3 (9-16) of *Philosophical Review of Poverty*, Wolff (along with Lamb and Zur-Szpiro) present a detailed review of Amartya Sen's position, while Chapter 5, 'Is poverty 'capability deprivation'?' (25-27) is ultimately a critique of Sen's position (Wolf, Lamb, Zur-Szpiro 2015). It seems to me that this redefinition of poverty is complementary to the strong efforts of Claudia Card for reconsideration and relativization of genocide, previously having to do with a great number of victims, now proclaimed to be acts that generally speaking destroy the entity of a group (for example, rape of women in civil war).

15 - Thirty or forty years ago,

it was possible to apply, and with a few strings pulled, receive (provided one had regular employment, on the books - which on the other hand one could not get without proof of residence, a basic trap immigrants often find themselves in) an HLM (*habitation à loyer modéré*) apartment on the periphery of Paris. The phrase exists since 1945, having taken over from the so called HBM (*habitation bon marché*), established in 1889 by contemporary hygienists and paternalists of the modern bourgeoisie of the Second Empire to prevent revolutionary outbreaks. Today it is very difficult to acquire such an apartment, with rent for a three-piece apartment some 600 euros (or a small one-piece apartment, 500 euros). Minimum guaranteed pay in France is set at 900 euros. Such apartments in France are not only for (active) workers, but also retired workers, disabled workers receiving payments from the state, in a word,

they are social apartments.

16 - Perhaps the best description of the medieval origin of the Joint Economic Household of the Family, that is, Household Communities Outside the Family come from Max Weber in his thesis *The History of Commercial Partnerships in the Middle Ages* (1889).

of the problem of poor conditions of life in poor and working class neighborhoods, such pseudo-joint dwelling still exists, and such neighborhoods are still erected.¹⁷

A hundred and fifty years ago, Engels, a master of description of cities and terrible life conditions (his descriptions of Manchester or Wuppertal are unforgettable), held before him a multitude of books and texts from various hygienists and so called bourgeois urbanists, a few manifests and appeals to the bourgeoisie,¹⁸ as well as books and texts of socialists such as Proudhon – all of whom he criticizes sharply for their ignorance and counter-revolutionary positions that workers dwelling could be radically improved.¹⁹ I will end here by listing a few problems, agreed upon and registered by all (without any major differences), and with a few suggestions that have of course never been fulfilled. In 1872 Engels finds (the reform by Haussmann [or, as he calls himself in his memoirs, *‘artiste démolisseur’*] is already complete and known to all) that the workers have already been pushed out to the periphery, that smaller apartments are rare and expensive because the construction industry produces large apartments more profitably. Further, Engels (in what is at the time perhaps a unique position of a European intellectual, familiar with the conditions of social justice in countries across Europe) identifies the better position of the English worker (he speaks of England and the continent), all of which is insufficient since the capitalists are lying when promising to build new apartments, leaving aside the question of hygiene in workers’ neighborhoods. Rather, they simply displace out of the city center the cesspools of disease, i.e., workers. (This, in any case, is how Engels defines Haussmann’s strategy.) The extraordinary speed and development of capitalism (over the course of at most thirty years) has resulted in 1870 no longer having twenty or thirty families living a single house (something that will appear in the Soviet Union after the revolution), nor any more talk of fatigued workers deprived of sleep, working thirteen hours a day, or child labor and death.²⁰ Similarly, there are no more projects (some of which are indeed ingenious) of monstrously large social houses or blocks in which several thousand workers live and eat in common kitchens. There are not many optimistic protocols in 1872, but the difference from 30 years prior, it seems to me, far greater, than in the last 150 years. In 1872 there is still an almost unnatural enthusiasm that the mobilization of a large group of people which would destroy the few who rule was possible, just as it is possible – perhaps more interesting for us – to pass from one class (those who have nothing but their labor) into another. One great idea certainly speaks to this (although Engels calls it minimally positive, he allows himself to fantasize about it): that the solution to the housing question consists of each renter becoming the owner of his apartment, transferring the value difference between the initial cost of a house and its current market value to society.

From the point of view of movement of the population rendered precarious by war and poverty, taking place the last few years – completely

17 - The only alternative I would mention here, of which there certainly has not been enough written in English, which could potentially satisfy the social parameters of equality and productive social action, refers to the incredible engagement of Otto Neurath, in Vienna, immediately upon WWI. Neurath attempted to build settler communities, to unify urbanism with an organization of work and life. Two passages from his writing are as follows. 'The similarity of the apartment, the similarity of the building's parts (norms) is an expression of modesty, but also an expression of the sense for equality, which roots in both, fraternity and envy alike. Not one singular building is like the brick within a house. A new community is created from the class solidarity of the labor-forces'. And: 'A complex of low rise buildings with small gardens, which has not been born out of a collaborative cooperative

companionship's organization, is of similar lifelessness as a large Kamienica tenement. Only via a life based on cooperative association will a new common life style emerge.' Cf. Hochhäusl, 2011: 146.

18 - Perhaps the most famous appeal to the bourgeoisie comes from Georges Picot in *Un devoir sociale et les logements d'ouvriers*, in which he calls for a struggle against socialism in order to achieve something better still than socialism and to restore the family, custom and life of workers in a healthy and moral household (Picot, 1885).

19 - Proudhon (for Engels this is probably a forerunner of Rawls) is one who seeks 'eternal justice', who speaks only of justice... *Fiat justitia, pereat mundus!*, writes Engels - may there be justice, even if the world burns. Cf. Engels, 1872.

20 - Only twenty years prior, in *Des classes ouvrières en France*

pendant l'année 1848, Jérôme-Blanchi describes workers' housing in Rouen and Lille and carries a report by a famous doctor from Lille, Gosselet, saying that 21,000 children are stillborn in France each year, and another 20,700 die by the age of five (Blanchi, 1849).

uncertain of place of residence, poverty, work or ownership over real estate – the concept of dwelling, apartment or group living have completely changed. The new concept of design or project certainly depends on these changes.

Acknowledgements

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Crowdfunding & Architectural Practice.

A Testing Ground for Homestay-Hotel in China

Sheng Zhao

Abstract

Young architectural practices are short of building opportunities, with limited knowledges of the production chain and access to potential investors among the relevant monetary aspects that deprive them from the practice of architecture as “the act of construction” (Bernstein, 2014: 19). Mobile Internet platforms, however, may provide new frames to reimagine responsibilities and risks of the profession. Wee Studio experimented architectural crowdfunding in China as a financial model that questions the need for a conventional client, supporting instead architectural projects by means of individual investments in small amounts of money. Crowdfunding initiatives spread rapidly among Chinese social network users, thanks to the WeChat platform – whose power in multiplying the popularity of the idea and easiness of online payment made the Treehouse project possible. Design and construction of a pair of wooden huts that complement a homestay-hotel in Miyun (Beijing) were completed between November 2015 and September 2016.

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The Business Model

The initial idea was to redefine the relationship between the output of architectural work and the need of a client, identified as the owner of the final property or the one investing in its construction. Therefore in this particular project a conventional client cannot be identified, and there are multiple owners and countless contributors instead. In crowdfunded architecture, designers take responsibilities and assume some risks to see their project built, without counting on a contracted fee for their intellectual and operative work. Architects are in control of costs across the entire chain of architectural production and manoeuvre budget constraints according to the available resources that their design can mobilize.

The “Business Model” diagram explains the structure of crowdfunding in the Treehouse case. The three black figures represent the critical components of this business model, which are, who: the background and motivation of our team; what: the prospect of our project and related details; how: the funding goals and rewards for investors. A video in company with text and pictures conveyed the final narrative of the business model and was posted online through a professional crowdfunding platform, which served as the supervisor of the entire operation. Based on different levels of interactions between prospective investors and the project design, six funding options were defined, which ranged from 100 RMB to 10,000 RMB.

Money Flow

The “Money Flow” diagram bridges money and geography while illustrating how the money was raised. Each contributor is pinned on the map to locate the origin of funders and connected to a specific amount of money which are assorted in a grey scale and arranged in chronological order. The co-builders who invested the most money and also own part of the project are highlighted as gradient columns. The rest of investors who contributed to the initial goal of 50,000 RMB are highlighted as translucent thick grey lines. The initial goal was achieved in less than three hours since the project was launched online, because most of co-builders were in Stage One. In fact, the openings for co-builders were ‘hot sells’ and run out of number before other people could get it.

Most of investors and all of the co-builders are from the four most developed urban areas in China: Beijing, Shanghai, Guangzhou and Shenzhen. Coincidentally, according to the housing price rank in 2017, these are exactly the top four areas with highest cost per square meter (Beijing 67,822 RMB/sqm, Shanghai 52,584 RMB/sqm, Shenzhen 50,900 RMB/sqm, Guangzhou 40,030 RMB/sqm; CASS, 2018). For sure young people prefer to live and work in these regions, so we assume the anxiety of living under the high housing pressure, without forgetting a concentration of interests in architecture-related initiatives and social media trends, was the main reason why most investors were from these cities. Besides, Beijing has the most pins because it is where the site is located. The

project of Treehouse showed them a way of getting rid of crowded urban concrete forest, and, moreover, provided a place of their own with spiritual luxury and physical closeness to the nature. Also Lao xiang networks play a role: Lao xiang stands for the relations and bonds that people from the same village, town or province in China usually rely on for starting new businesses. As Hunan Province highlighted on the map shows more points than other regions, the cause for that are the local connection of the project initiator, Haifei Dai, whose hometown is there and whose previous work for a self-build egg house had gained reputations.

Construction Cycle

The “Construction Cycle” diagram illustrates how and where the money was spent. A sequence of construction stages is coiling around the plan of the Treehouse from inside out. The days and actual costs of each stage are aligned together in this circular timeline.

The matrix on the left represents detailed costs in three categories: materials, products and manpower. Except for the high costs of steel structure and wood panels, which are the main material of the cabins, we can find that quite a lot of money were spent on special needs such as floor and plumb heating systems and a freeze-proof steel plumbing system. These special needs were not part of the initial plan: as the crowdfunded money surpassed our expectations, the complexity of facilities and details were brought to a new level. More visitors and greater popularity gave us the requirement of including a shower/toilet unit and making sure it is functional during the early winter of Beijing.

Some Open Issues

In the end, we successfully raised 177,953 RMB – more than three times our initial goal. Nevertheless, what transcends this number was a transient community based on this crowdfunded project. The Treehouse had become not only a site where people could participate the process of architecture, but also a place where people could interact with each other. It turns out crowdfunding works through not only one single piece of architecture but also the very essential meaning of place – where people talk and enjoy the space.

This is a meaningful architectural experiment for all of us, but some issues still remain to be discussed in the future. On one hand, the ownership of the house could be crowdfunded but land property requires more careful considerations. In this case the land use right was rented by our team for 20 years and operated by the hotel manager member, in agreement with the Chinese legal framework. We believe there could be more creative ways to be explored in the future. On the other hand, the value of the architects’ labor was never counted into the construction cost cycle. As an experiment, we were happy to see everyone was enjoying this project and the result of the built cabins, but a more sustainable way needs to be developed to make it a truly new architectural practice

model. If we are to consider the economies of the project seriously in the practice of architecture (Bernstein, 2014), crowdfunded architecture works in the direction of connecting 'design value' to what individuals put money in with reference to an architectural project (Gray, 2014). Questions remain open on who is entitled to capture and redistribute the additional value, once the crowdfunding lifecycle is over, to avoid the 'design value' being reduced to a product of consumerism.

Acknowledgements

The author of this article collaborated with Wee Studio in Beijing on this project during 2015-2016.

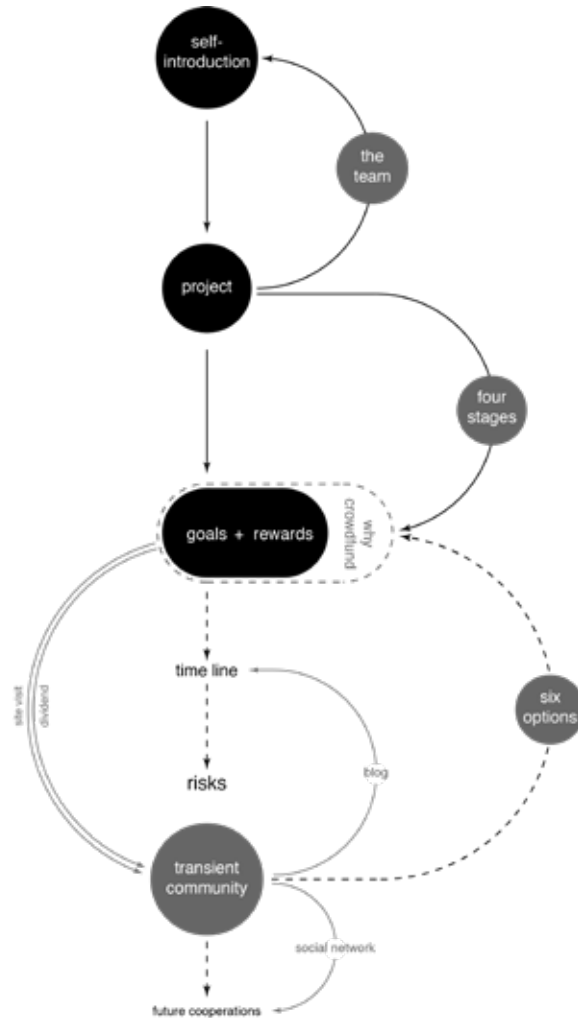
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Fig. 1 - Business Model.

Narrative

Payback



The team

DAI Haifei

Founder of Wee Studio in Beijing.

ZHANG Yanping

Co-founder of Wee Studio in Beijing.

Graduated from China Academy of Art. Three years' working experience in ZAO/Standardarchitecture. Focusing on cultural/creative space.

CHENG Dajun

Founder of Ai Qiu Shan Ju; Experienced hotel manager.

ZHAO Sheng

Architect; graduated from Tianjin University; Master of Architecture (2021) Harvard University Graduate School of Design.

Four stages

Stage One

Target Amount: 50,000 RMB

Assembling steel structures on site, installing exterior facade and interior panels.

Stage Two

Target Amount: 100,000 RMB

Finalizing interior details, completing plumbing system in the shower unit.

Stage Three

Target Amount: 150,000 RMB

Improving surrounding area's landscape (installing pavement and dredging the stream)

Stage Four

Target Amount: >150,000 RMB

Realizing another unit near the site.

Six options

Meet the Treehouse

Invest Amount: 100 RMB

Payback:

- Free mountain spring tea experience in the Treehouse.
- One accommodation voucher in 150 RMB, applying to check in for both Treehouse and the hostel next to it (welcome to walk-in when it applies and it's free to use multiple vouchers in one purchase).
- One home-made grain package from Hua Yuan Village (800g, combination of millet, corns, broomcorn, chestnut).
- One package of Treehouse postcards.
- * Availability: limitless
- ** Delivery: Delivery: from 30 days after crowdfunding ends

First to live in the Treehouse

Invest Amount: 299 RMB

Payback:

- One free accommodation voucher, enjoying the priority to experience the Treehouse including three meals a day (except national holidays). The Treehouse is capable of accommodating two adults and a child. (Non-holiday price would be 680rmb and weekend & holidays price would be 980rmb.)
- 200ml fresh handmade apricot kernel oil.
- One home-made grain package from Hua Yuan Village (800g, combination of millet, corns, broomcorn, chestnut).
- Your name would be recorded in Treehouse co-builders' booklet, and the construction progress would be updated to you.
- * Number limitation: 100 persons
- ** Delivery begins 30 days after ending of crowdfunding.

Build the Treehouse

Invest Amount: 599 RMB

Payback:

- One day co-building experience with us during construction period, three meals a day provided.
- One free accommodation voucher, enjoying the priority to experience the Treehouse (price: as before).
- 200ml fresh handmade apricot kernel oil.
- One home-made grain package from Hua Yuan Village (800g, combination of millet, corns, broomcorn, chestnut).
- Your name would be recorded in Treehouse co-builders' booklet, and the construction progress would be

updated to you.

* Delivery begins 30 days after ending of crowdfunding.

Deeply experience the treehouse

Invest Amount: 2000 RMB

Payback:

- Lifelong 10% discount of the Treehouse and Ai Qiu Shan Ju Hostel reservations.
- One free accommodation voucher, enjoying the priority to experience the Treehouse (price: as before).
- 200ml fresh handmade apricot kernel oil.
- One home-made fresh food grain package from Hua Yuan Village (800g, combination of millet, corns, broomcorn, chestnut).
- Your name would be recorded in Treehouse co-builders' booklet, and the construction progress would be updated to you.
- * Delivery begins 30 days after ending of crowdfunding.

Be the co-builder

Invest Amount: 5000 RMB

Payback:

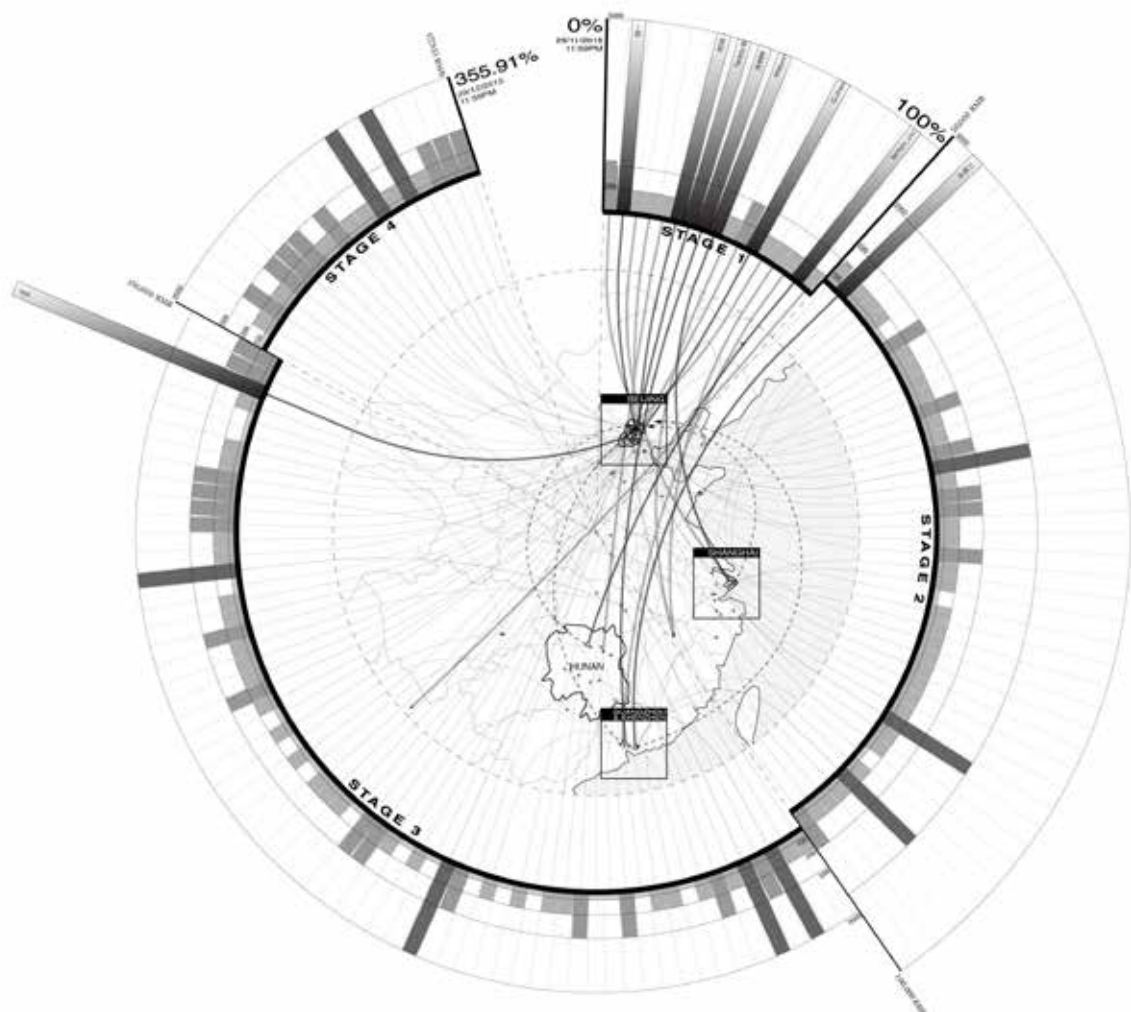
- Become a co-builder of the Treehouse.
- Be included into the shareholder's board. Share 5% of participation in annual profit of the Treehouse running as part of hostel. Two years later you can either choose to cash back the principal or purchase the stock right.
- Lifelong 20% discount for you or your friends in the Treehouse reservations.
- the Treehouse wooden model
- 10kg local fruit package and food grain package per year.
- * Amount limitation: 8
- ** Delivery begins 100 days after ending of crowdfunding.

DIY a Treehouse

Invest Amount: 10000 RMB

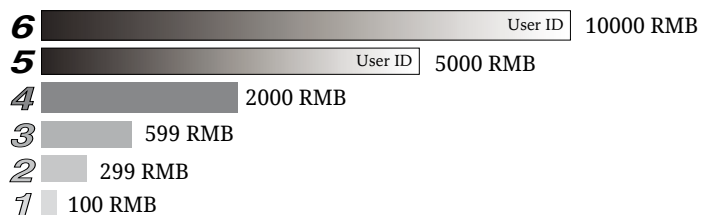
Payback:

- DIY your own Treehouse, the investing money works as the deposit fee for reserving the service. You can have your own customized Treehouse located in your backyard or community.
- After the crowdfunding period we will contact you. The final payment would be 100,000 RMB including the deposit fee, it incorporates the designing fee and construction & material cost.
- The whole period from design to product would be three months.
- * Amount limitation: 5
- ** Delivery begins 100 days after ending of crowdfunding.



Legend

- ▣ Main Donor_Opt 6
- ▣ Main Donor_Opt 5
- Supporter_Opt 4
- Supporter_Opt 3
- Supporter_Opt 2
- Supporter_Opt 1
- ⬅ - - - Site Visit
- First Stage Donor



(above)

Fig. 2 - Money Flow Diagram.

This diagram shows that in one month time period, how much and how fast the funds were raised from the Internet. Each column in a grey scale representing each person from the Internet relating to a specific location and amount of investment within the structure of our business model.

Fig. 3 - Funding options.

MATERIAL



#M01
Steel Structure
-Material+Assembling
-Total=30000



#M02
Wood Stud
-3x5 UnitPrice=45
Total=45x2=90
-2x3 UnitPrice=15
Total=15x10=150
-Total=240



#M03
Oriented Structure Board
-9MM UnitPrice=70
Total=70x45=3150



#M04
Recycled Wood Panel
-Multiple finish
-Total=10000



#M05
Plywood Panel
-9MM UnitPrice=140
Total=140x15=2100



#M06
Merbau Wood Panel
-1500x90x20 UnitPrice=25
Total=25x240=6000
-2100x90x20 UnitPrice=20
Total=20x50=1000
-Total=7000



#M07
Carbonized Wood
-90MM UnitPrice=10
Total=10x20=200
-4x6 UnitPrice=22
Total=22x13=286
-Total=486



#M08
Waterproof Paint
-BLK UnitPrice=350
Total=350x8=2800



#M09
Insulation Panel
-4MM UnitPrice=5.5
Total=5.5x100=550
-4MM UnitPrice=6.5
Total=6.5x100=650
-Total=1200



#M10
Clear Finishing Paint
-EX UnitPrice=220
Total=220
-IN UnitPrice=150
Total=150
-Total=370



#M11
Glass
-A UnitPrice=800
-B UnitPrice=800
-C UnitPrice=2000
-Total=3600

PRODUCT



#P01
Septic Tank
-GLASS FIBER STEEL
1 TON SIZE
UnitPrice=800
Total=800



#P02
Tatami
-3.5CM NO EDGE
YELLOW
UnitPrice=480
Total=480x3=1440



#P03
Stainless Steel Plumbing System
-SPECIAL CONNECTION
LOW TEMPERATURE
PROOFING
Total=3000



#P04
Plumbing Heating System
-WIRE UnitPrice=6
Total=6x55=330
-MODEL UnitPrice=830
-CPU UnitPrice=100
-Total=1260



#P05
Floor Heating Units
-DUAL DIRECTION
Total=830



#P06
Plumbing Hardware
-SHO UnitPrice=70
-BAS UnitPrice=50
-Total=120



#P07
Cabinet Hardware
-SM UnitPrice=67.4
-DOR UnitPrice=141.5
-DOR UnitPrice=461.7
-Total=970.6



#P08
Wall-mount Sockets
-9X9 GOLDEN
UnitPrice=45
Total=45x10=450



#P09
Toilet
-WHI DIAMOND
UnitPrice=1600
Total=1600



#P10
Faucet
-OXO STEEL
UnitPrice=900
Total=900



#P11
Shower Set
-SUP UnitPrice=70
Total=70x2=140
-SWITCH UnitPrice=150
-HEAD UnitPrice=450
-Total=740



#P12
Folding Curtain
-TRANSLUCENT
UnitPrice=1200
Total=1200



#P13
Water Heater
-ELEC STORAGE
UnitPrice=4500
Total=4500



#P14
Customized Basin
-WHITE CORIAN
UnitPrice=2000
Total=2000

MANPOWER



#MP01
Carpenter
-UnitPrice=300
Total=300x51x2
=30600



#MP02
Electrician
-UnitPrice=300
Total=300x3
=9000



#MP03
Plumber
-UnitPrice=300
Total=300x2
=600



#MP04
Helper
-UnitPrice=100
Total=100x15
=1500

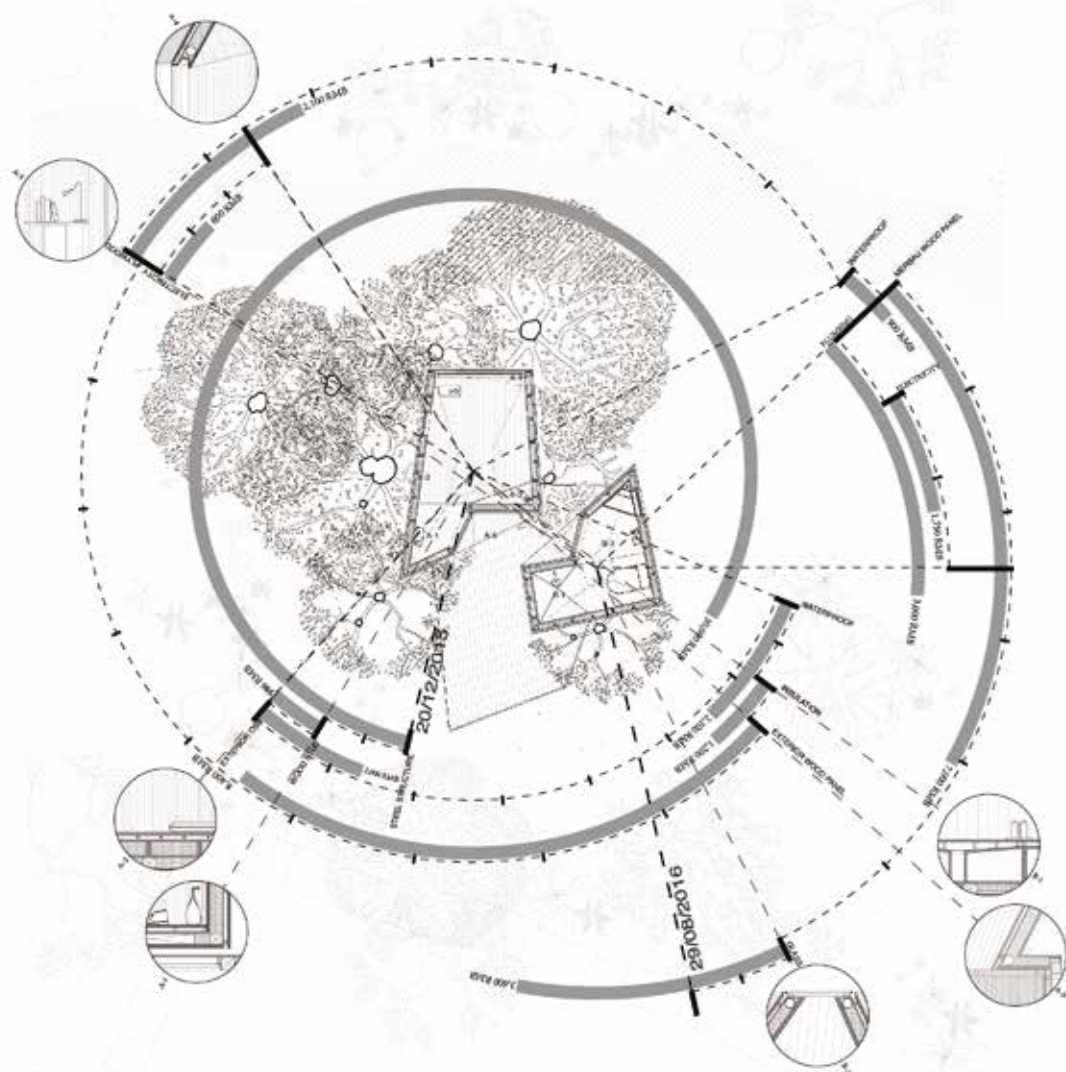


#MP05
Painter
-UnitPrice=400
Total=400x2
=800



#CODE
Name
-TYPE UnitPrice
Total=UnitPrice x Number

Fig.4 - Construction Cycle Diagram.



Legend

- | | | | |
|---|--|---|-----------------------|
|  | Construction Node |  | Total Amount of Money |
|  | Construction Period
(manpower*time) |  | Beginning/Ending Date |

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Labour, The Way We Work

Commentary

—
Melanie Dodd

Abstract

Exposure to inequality and precarity is now so pervasive that in the darkest of ways, it appears to have provoked an appetite for change in a new generation of young architects. Providing a forum in which to discuss the forces shaping our unequal built environment, the *Labour* Symposium at Central Saint Martins hosted by Spatial Practices in March 2018, turned its gaze toward the profession of architecture, critically investigating architecture and the building industry through ‘the way we work’. As neo-liberalizing, market fundamentalist agendas have taken hold of our contemporary cities, the steady commodification of our urban and social fabric extends into our daily lives, revealed in the way in which architectural and construction labour is affected through deregularization and liberalization. Reporting on the contributions to the Symposium, this article showcases a series of collective platforms agitating for change, representing an apparent upsurge in actions toward the reconstruction of our profession.

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London's accelerating levels of inequality are now infamous. This pernicious trend has been well documented but is now tangibly *experienced* across a broader sector of society than ever before. A recent Intergenerational Commission Report, for example, reveals that one in three millennials in the UK will never own a home. Exposure to inequality and precarity is so pervasive that in the darkest of ways, it appears to have provoked an appetite for change in a new generation of young architects, for whom personal and professional experiences overlap uncomfortably. Increasingly as a consequence, there is a growing appetite amongst architects to look unflinchingly at the mechanics of inequality across their work, study, and personal lives, and to find ways to address it. Responding to this appetite, the 'Fundamentals' Debate Series – hosted at Central Saint Martins with Oliver Wainwright, the Guardian's Architecture Critic – has been delving beneath the surface of architecture, providing a forum in which to discuss the forces shaping our unequal built environment including structures of planning, funding streams, and economies of property development – the real forces that drive the architectural objects we find emerging on the streets of our cities. In the initial series, the contributors were economists, planners, developers and consultants; people who operate in the wider context but are often absent from the myopic world of architectural debate and reportage. Against the backdrop of startling inequity in London, the fundamental forces of planning, land, housing and industry, unpacked by the contributors, exposed an 'effect' far greater than that the architectural object could have. Continuing to ask difficult questions, the most recent series turned its gaze inward upon the profession of architecture, critically investigating architecture and the building industry through 'the way we work'. Shining a spotlight on training, employment, working practice, and procurement within the architectural industry, three debates – 'Learn', 'Work', and 'Build' – cast an interrogatory eye over what our industry requires from its labour force. The appetite for this sort of scrutiny was surprisingly large, generally filling a lecture theatre with capacity of 400, and generating vigorous discussion both on the night, and later on social media platforms.

The final Symposium 'Labour' continued to reflect on the way architects's work by expanding the discussion on current work practices of our profession to international contexts, and scales,. It started by interrogating architecture and labour more broadly in relation to social relations, public policies and means of production. As we know, architecture costs money, and the relationship between architecture and capital is fundamental yet fraught. As neo-liberalizing, market fundamentalist agendas have taken hold of our contemporary cities, the steady commodification of our urban and social fabric extends into all aspects of our daily lives, including the way we work. The ethical dimensions are concerning, revealed in the way in which labour is affected through privatization, deregularization and liberalization. The labour force of construction

workers responsible for erecting a building is often invisible in architectural discourse, yet its arguably one of the more visceral and primary manifestations of the relationship between people, and the buildings they inhabit. Increasingly, in vast construction projects across the globe, armies of construction workers are subjected to conditions akin to slave labour. This raises questions for architects of the extent and agency of our ethical responsibility toward these workers, and an engagement in an understanding of what we, as architects, are asking of them, and also what the human cost is.

This inter-relationship between the neoliberal city, its means of production, and the labour it co-opts and implicates, was introduced through a provoking and scene-setting contribution from Carol Tonetti and Ligia Nobre, from Sao Paulo's *Escola de Cidade*, and collaborative practice *El Gruppo Inteiro*. In 2017, the Escola da Cidade was granted funding from fines imposed by the Ministry of Public Labor Prosecution on a Brazilian construction company, who were convicted of employing workforce based on practices of contemporary slavery when building the Guarulhos International Airport Terminal 3. Tonetti and Nobre described their resulting project, intended to focus public debate on major infrastructure works, migration and labour, including the slave-like work scenarios that exist within the contemporary context of global architecture and the building industry. Tonetti traced the recent context in Brazil – in which 10% of the workforce are construction workers, and where the loosening of labour laws and the growth of 3rd party contracts has contributed to a situation, reached in 1995, in which the Federal government acknowledged the existence of slavery. In response to this, and planned over a one-year period the *Contra Condutas (Counter Conducts)* project was intended to raise awareness and produce knowledge concerning work systems by mapping current conducts and protocols in force, and proposing different or 'adjusted conducts' as alternatives to normalized procedures in fields of work. Their questions asked what role can architects have in decreasing the violence of work sites, especially in the situation in which architects no longer enjoy the prerogative of managing the whole project. Through documentary video, and other collated and visualized data analysis, they evidenced the dubious ethical practices involved in 'executive' political built projects in Brazil, as well as ubiquitous 'fast-tracking' construction processes. They also collated documentary evidence on alternative practices like the USINA Collectives, a form of self-managed construction task force, and key in what they call a 'political-pedagogical' project where research has deliberately engaged with analysis and visualizations of found situations, including using art practice and the vocabulary of the construction workforce as tools.

Building this context of enquiry, Adam Kaasa's courageous and provocative 'thought experiment' framed urban gentrification as a hate crime. Unpacking and positioning legal and human rights principles to serve as a hypothetical structure of resistance to urban development illustrated

how the ‘apparatus of visibilities and invisibilities’ can be traced, and understood as a starting point toward a radical re-interpretation of existing systems of power and authority. As a grounded example of this in London, *Concrete Action*, a whistle-blowing platform for built environment professionals, argued that the communication of knowledge to a broader audience should be a core ambition of any urban development project. Established as an anonymous web platform and collective, *Concrete Action* exist in what they term ‘a grey area between ethical responsibility and perceived lack of regard for accepted modes of operation’. Through providing a secure route for the release of privately held information, the platform connects professionals working in the fields of urban design, planning and architecture with community groups, and activists fighting for social housing and public land in London. Their geographical mapping of council estate demolition and regeneration in London is an example of how they collate and visualize information in order to activate and engage residents. They argue that a better communication of the complexity within the invisible processes of urban development, can provide the key to greater community engagement and resistance.

Acting globally, but based in New York, the collective platform *Who Builds Your Architecture?* (WBYA?) represented by Kadambari Baxi and Laura Diamond Dixit, built upon this discussion in the presentation of a thorough and sustained body of research, mapping transnational building projects and migrant labour, again acting as a tool for delivering communication and knowledge. Illustrating that the work of advocacy needs triggers, Baxi explained that WBYA? emerged in 2011 out of the action of the ‘Gulf Labour Artists Coalition’ focused on the construction of the New Guggenheim Museum in Abu Dhabi, by Frank Gehry. Realising that no architects were on the list of the petition, the founding members began a process that resulted in the ‘Architects Pledge for Fair Labour’, and interventions in the AIA Codes of Ethics, but which in turn lead to a questioning of how greater ‘effect’ could be leveraged, especially in the light of the shocking hesitancy of architecture practices to engage in ‘digging dirt’ on bigger transnational and ethically dubious projects. The decision to ‘map’ or trace the activities of large transnational construction projects, was seen as a tool for making visible what is normally invisible, a way to bring ‘symmetry’ to what is currently, in their compelling argument, an asymmetrical condition. This initial ‘mapping’ as mechanism, echoes the desires for counter cartographies of resistance in the *Contra Conditas* Project, and for WBYA? this has developed in a Field Guide, but also a ‘Graph Commons’ – a database of research which can also host visualizations, of for example, complex networks of key subcontracts like curtain walling; evidence revealing the evasive tactics of transnational construction in avoiding labour laws and other codes of ethical conduct. This deployment of forms of gathering, analysis, and communication – as tools to capture and expose labour violations – was conceived in common amongst contributors as forms of activist practice which brings to

public scrutiny actions normally left hidden. Since the 1990's, against a backdrop of the dismantling of conventional forms of building contract, and the exponential rise in complexity of multinational construction, the oversight or purview across projects has been increasingly veiled and institutions are often complicit. Even Brazil, with its very sophisticated legislation with respect to public participation, has not been able to avoid the violation of labour laws. Against the context of transnational construction labour force revealed, what is of course critical to understand is that architects are also workers. The work that architects do, whether aesthetic, technical, theoretical, social or administrative is a form of labour, yet rarely framed in this way. Architects rarely participate in unions or the organization of worker's rights, and are highly susceptible to exploitation in the workplace, individually by employers, or collectively through competition and procurement systems. Ethical codes for architecture exist in reductive form at a professional level, but even these are often disregarded at a personal level, in the workplace, or in the field of design production.

Bringing the dilemmas of labour to the profession's own doorstep the London-based *Precarious Workers Bureau (PWB)* introduced their provocative and practical publication 'Training for Exploitation'. As an arts and design orientated platform, PWB focus on how institutions are implicated in systemic free labour. PWB's praxis springs from a shared commitment to developing research and actions that are practical, relevant and easily shared and applied. Beginning with a transparent illustration of their employment contract with Central Saint Martins for the contribution to the symposium itself (fortunately for the hosts, fair and ethical) they described the culture of free labour across the arts and architecture, and the need to build solidarities of resistance. Their careful definition of the condition of 'precarity' and its impacts revealed it as a lived experience of intermittent and irregular work, insecurity; subject to constant mobility and migration, and a condition which is 'seeping' into all areas of our contemporary life.

For young designers and architects in the audience, of course, this description of precarity rings sadly true. The journey from trainee to professional, appears to demand the subjugation of all aspects of personal life in favour of enhancing 'employability' through slavish work patterns, amidst a current higher education mantra of employability that is pervasive across the sector too. Shumi Bose delved further by revealing the potential and ironic contradictions for architectural labour in respect to 'expanded' fields of architectural practice – roles of community engagement, policy, governance, research and activism itself – posing the question whether such expanded fields are re-numerated properly, or whether this expanded field is just an opportunity for more work to be undertaken, for less. The fact that the average male architect's salary has increased less than 7% since 1977, against median worker salary increase of 25%, seems to provide evidence that supports her concern. In

an environment in which high profile professionals like Patrik Schumacher (*Zaha Hadid Architects*) argue for the desirability and legitimacy of a culture of cheap internships and long hours, as part and parcel of the normal and competitive nature of practice, the pragmatic case for everyday resistance from PWB was refreshing, and set the tone for the final session.

Peggy Deamer, as both a writer and academic, and founder of *The Architecture Lobby*, provided a forceful and compelling case for architects to identify as workers, providing a background for what it means to be an architect in neoliberal times. Her structured argument, manifesto-like and a core part of the Architecture Lobby's tools for action, provided us with a fundamental re-definition of practice, which she argues should be acknowledged as 'work' not 'art'. The framing of the profession through the provision of 'piece' work (the worst form of labour) sharply conveys the challenges. Understanding that 'creativity is still work', is something that artists have better recognition of than architects. Deamer links this to the broader issues of economy when she states that as architects, we are part of the economy – and until we understand and embrace this we won't be in a position of power or agency. In her view, this agency depends on a closer relationship to the construction industry through contractual engagement, shared risk and shared rewards; a type of 'relational' contract. Complementing this reconstructive mission statement for the profession, Jeremy Till brought a magnifying glass to the notion of labour in architecture through a deep examination of the principles embedded in the architectural competition. Drawing on the inherent exploitative core of the competition as a form of procurement, his critique sets them up as 'dystopias of social process' based entirely on a vacuum approach which renders the design process devoid of any context, and in which anything other than taste and aesthetics is subjugated in favour of the spectacle of the picture – the dreaded presentation boards. Worse, he uses the competition to hold up a sinister mirror demonstrating how the profession actually frames its services through these same principles – in so doing negating the 'real' value of the architect in its fullest and most complex dimension. Concurring with Deamer, Till's argument forcefully demonstrates that the architectural profession readily 'throws away' its architectural knowledge because it doesn't value it, beyond that which resides in the architectural object. Till's call is toward a reconsideration of the value system of the profession, and of driving of change in the economic infrastructures which feed procurement.

What characterized each of these sophisticated and rigorous contributions was a collective engagement with the fundamental networks and forces of architectural labour, in itself both refreshing and urgently required. After delving into the underlying 'apparatus of visibilities and invisibilities' in various building projects – from the deliberate exclusion of full knowledge about economic systems, to the violation of protocols and legal frameworks – the contributors collectively called for a project

of reconstruction within the profession. Most exciting, speakers were often representing organisations and collective platforms agitating for, and driving forms of ‘reconstruction’ themselves, from *Concrete Action* to *Who Builds Your Architecture?*, from *Precarious Workers Bureau* to *The Architecture Lobby* – and so we were privileged to see a collection of smart (often female) activists, prepared to engage in these complexities with precision, rigour and humour.

RE: theory

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RE: *This Thing Called Theory*

Commentary

—
Andrea Alberto Dutto

Abstract

Focusing on *This Thing Called Theory*, and last of a series of itinerant events and publications, the seminar 'Double Crossing' in which the author acted as respondent gathers five different points of view about the possibility of producing theory as an act of betrayal against a previous 'thing', be it a theoretical discourse or a fact. A theory does not simply construct something new but undertakes an aggression towards the 'old' in order to produce the 'new'. Several suggestions come out about how such an overturning of architectural theory can be undertaken. Among these, different theoretical branches ranging from critical thinking to computational criticism are involved. In general, the seminar outlines two main tendencies or attitudes to portray theoretical betrayals in architecture: those who consider theory as a possibility of betraying intentions and others who intend betrayal as a continuous process of exit and re-entry from the domain of architecture.

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ARDETH#03

Last of a series of itinerant events and publications (Ponzo, G., Stoppani, T., Themistokleous, G., 2016), organized as a follow-up to the 2015 AHRA conference *This Thing Called Theory*, ‘Double crossing’ took place on May 30th at the Architectural Association in London as part of a PhD symposium, organized by Doreen Bernath (AA & Leeds Beckett University) and Teresa Stoppani (AHRA) with other four guest speakers: Mark Cousins (AA), Sergio Figueiredo (TU Eindhoven), Ivonne Santoyo Orozco (Iowa State University), Douglas Spencer (AA & University of Westminster), and two respondents: Will Orr (AA PhD programme) and me. This time, the relationship between architectural theory and practice was faced by focusing on those theoretical deviations, or invasions of field, in other disciplines and fields of knowledge that do not conventionally correspond with that of architecture though end up being embedded into architecture. The seminar unfolds from a specific theoretical hypothesis: theory and practice display a tormented sentimental relationship marked by unfaithfulness, untruthfulness, and a suspicious tendency to betray. This hypothesis finds direct continuity with several issues that emerged during previous meetings and that the reader might find well enucleated in Giorgio Ponzo’s article published on “Ardeth” #01 (2017). Among these, I’d like to shortly speculate about two crucial issues among those mentioned by Ponzo. First: the impossibility of defining the field of architectural theory as a ‘corpus’, such as a delimited basin of positions, nor as a canon or a meta-theory. Conversely, theory should be thought of as a way of ‘thinking about’ and ‘operating on’ architecture. Second: theoretical thinking obeys to rules that do not necessarily coincide with a specific practice but rather, and sometimes simultaneously, pertain to a multiplicity of productive domains, such as the school, the museum alongside the office. To these two issues, the last seminar suggests the introduction of a third stance: theory implies a transitive and transgressive behavior, it crosses spaces and disciplines by leaving lacerations, ruptures behind itself. Theory betrays.

On betrayal

The issue of ‘betrayal’ was anticipated by Mark Cousins at the previous TTCT conference. Cousins states his thesis in quite an explicit way: the intellectual appears to ruin the good ideas of others who preceded him. So, if there is a purpose in theory, even though implicit, this is to betray what precedes: to betray that on which the discourse is, however inevitably, grounded. Theory always comes halfway to a previous theory though this previous one also works as legitimizing agent of the new one. An example: Louis Althusser and his epistemological ‘new wave’ of Marxism; presenting itself as upholder of the ‘true scientific Marx’, thus legitimizing itself as true Marx readers, Althusser’s theory does not even concern itself with over half of Marx’s ‘Capital’. From the relationship between Althusser and Marx, towards other disciplinary domains, such as the relationship between Derrida and the deconstructivist architects,

Cousins can well ironize... However, does he simply see in such relationship an act of banalization? Well, not only. Seemingly, for Cousins, it is not simply a matter of ignorance or superficiality but rather of intentional acts: calculated betrayals. If the contradiction is rooted in theory then all that remains to do is to take note of it: to practice betrayal as an act of faith. From here, Cousins' urgent warning to architecture theoreticians: would you please get philosophy off the back of architecture?

Drawing on Mark Cousins' arguments, I would like to distribute what follows on two fronts, two ways of stating theoretical betrayals. On the one hand, those that evoke a kind of 'betrayals of intentions' like Ivonne Santoyo-Orozco and Douglas Spencer, who adopt theory in order to attack values that lie ahead of architectural theory. On the other hand, others who like Sergio Figueiredo and Teresa Stoppani use betrayal as a sort of 'transfiguration of facts', namely a process they entirely bound within the domain of documents and drawings.

On liquids

Ivonne Santoyo-Orozco believes that the so-called death of theory, or end of theory, is due to an ideological custom according to which theory would stand for a coherent corpus. To free itself from this doctrinal condition, which Santoyo-Orozco accuses – not too implicitly – of being ineffective, architectural theory should state its commitment to the present. Thus, it should turn from being seen as a 'thing' towards being acknowledged as a process, namely: "a process of interrogation of the present!". The reference goes to Foucault and his way of attributing to theory the role of critique of what we are instead of a critique of what architecture is supposed to be. This kind of rediscovery of theoretical commitment would imply a series of theoretical stances on the present rather than a coherent set of formal observations on architectural objects. Therefore, the task of the theorist would become that of making legible different tendencies and phenomena that cross one another, or rather: to portray 'intersectionality' as an attitude. Santoyo-Orozco adopts the metaphor of the liquid in order to propose this way of making theory as a container from which theoretical propositions can be contained or dispersed, contaminated, but never reduced to a solid corpus. Such metaphor of the liquid, also introduces an operative possibility for theory: to become a polluting agent.

On OOO

Not a theorist of architecture but a critical theorist of architecture theorists (as he proudly defines himself), Douglas Spencer addresses the question of how, today, architectural theory is betrayed through Object-Oriented-Ontology (OOO). The starting point is Log issue 33 titled 'The object turn' and dedicated to OOO with contributions by Graham Harman, Tom Wiscombe and Mark Foster Gage, who Spencer considers as representative authors of a neoliberal 'false consciousness'. Spencer's

critique is dispensed with the best dialectical-materialism orthodoxy: though OOO believes it can disregard the subject it actually does nothing but confirm capitalist attitudes. Thesis: OOO is correlated to Capitalism. Spencer proposes three arguments to support it. First, OOO is a marketing device: it embodies the very old fetishist exaltation of the new or something that pretends to be the very new; as such it is a matter of architectural magazines rather than a matter of architecture. Secondly, OOO abolishes whatever hierarchy of values between human and non-human objects. Third, OOO tends to produce 'general equivalence' that is exactly how capitalism works. This happens precisely in the way in which OOO applies an indifferent "mystical allure" to both subjects and objects, which, by re-proposing an image of Simmel, Spencer sees legitimated by neoliberal theories to "float in the metropolis as generic goods".

On algorithms

Sergio Figueiredo shifts the focus from the object of theory towards its more instrumental side, looking at how architectural exhibitions can change through the innovative implementation of big data technologies. In particular, he questions the possibilities offered by information technology in communicating data from different disciplines so that it is possible to establish fields of thematic coherence and coordinated operational techniques. More precisely, according to him: "we must appropriate the algorithms developed within the framework of data sciences". The main methodological reference is the book by Franco Moretti, 'Graphs, Maps, Trees: Abstract Models for a Literary History' (2007) according to which "literary scholars should stop reading books and start counting and mapping, thus replacing close reading with distant reading". Applied to the broader domain of knowledge production, and taking up the analytical model of Manfredo Tafuri, Figueiredo proposes to consider 'computational criticism' as a form of theoretical production based on remote reading of processes as an antidote to myopic analyses of singularities.

On erasure

Teresa Stoppani discusses the issue of 'double crossing', by which she means the way in which theoretical elaboration requires a preliminary exit from the discipline followed by a re-entry in which the initial object of the elaboration is no longer the same: it is transfigured. The intentional act of 'going out' implies the partial removal of some of the qualities of the starting determination. Erasure and construction are two actions through which theory operates, calling into question both conventions (i.e. drawing symbols and graphic layouts, for instance) and critical categories. To support her thesis, Stoppani offers two examples. The first concerns the issue of 'typology' through the work of the artist Lieven De Boeck on Neufert's handbook 'Bauentwurfslehre' in which the editorial layout displays the unconscious relationship that stands among

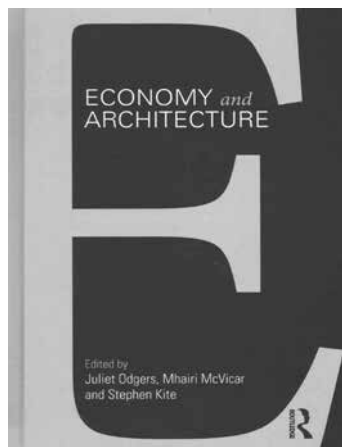
three very different functional typologies such as ‘museums’, ‘churches’ and ‘cemeteries’. At stake is an act of betrayal of the figure itself. This act allows the figure to become newly productive by turning itself into a museum, for instance, whatever it was before. The second example concerns the very famous drawing by Aldo Rossi entitled ‘Architecture assassinée’, in which Rossi’s critical architecture meets the critical project of Manfredo Tafuri. Here the former seemingly responds to the latter by means of a drawing that does not represent an architectural fact, as it seems, but rather represents the critique to which the architectural fact is submitted. It reveals how Tafuri’s critique of architecture is already fully incorporated into Rossi’s criticism of the city, and vice versa.

A possibility for a theoretical discourse based on mistrust and discontinuity, with respect to previous theories or facts, is the overall attempt this seminar points to. As continuity is unproductive or, at the very least, subject to an inevitable betrayal of intentions or a partialization of its original meaning, it is better to consciously undertake discontinuity. In this sense, we, as architectural theorists, must no longer worry about inventing a new theory, but rather deciding who or what must be necessarily betrayed.

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**Juliet Odgers (Editor),
Mhairi McVicar (Editor),
Stephen Kite (Editor),
Economy and Architecture,
Abingdon and New York,
Routledge, 284 pp. - 2015
Paperback: € 49.95 - ISBN-13:
978-1138025486**



"We are all too aware, as any practising architect must be, that a skilful engagement with the exigencies of market, money and price are necessary not only in running a successful practice but also in "procuring" a building" say the editors of the volume "Economy and Architecture", who indeed move entirely within the architectural realm as instructors and critics. This statement is the starting point for a broad reflection about the combination of budget concerns, management pressures and market feedbacks that the architect's profession underpins. However, the different contributors to the volume also attempt at conveying a more optimistic attitude: even if architecture is strictly connected with the market in economic terms, the volume in its entirety also shows that architectural

professionals can challenge the rules of the game by means of the creative potential of their designs and practices. Revolving around this central theme, the book implicitly rejects a unique and universal understanding of the term "economy" itself, which would reduce architecture to a simple commodity that strictly follows market patterns. On the contrary, the book explores a more complex and broader notion of economy, one that from the ancient origin of the term re-frames the connections between the *oikos*, which fundamentally is intended as the basic social unit, either in terms of family or community, and its spaces managed with the work of designers. The book is divided into four main thematic sections – Defining household, Negotiating value, Managing production, Politics and economy – each one hosting five different contributions that were previously presented at an international conference held at the Welsh School of Architecture in July 2011. Even though a clear relationship between the four parts of the book is not made explicit, each section explores a specific economic sphere of economy from a multitude of perspectives and case studies. This incredible variety of essays, set in very different historical and geographical contexts, surely deserves the reader's attention as it mirrors the mutable nature of the relationships between architecture and economy – or the unstable character of capitalism itself, paraphrasing Peggy Deamer's masterpiece (2014) "*Architecture and Capitalism: 1845 to the*

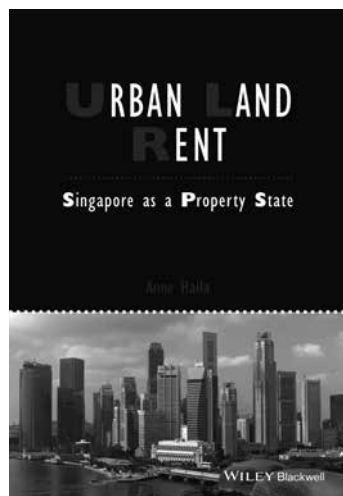
Present". Yet the volume "Economy and Architecture" attempts at expanding the critical perspective prior to modern capitalism and liberal markets, including essays devoted to earlier time than the 19th century.

Three further considerations should be added, though. Firstly, the volume includes contributions made both by architectural practitioners and by scholars of architecture and urban studies, as well as writings by ethnographers and sociologists. At any rate, no works by economists have been included in the assortment of essays, which is both challenging and possibly questionable.

Secondly, the book provides a clear holistic understanding of the relationships between architectural design and the marketplace. The whole volume confutes the value of design and architecture as strictly economic and completely measurable in terms of performance; alternatively, essays argue for a multifaceted set of values involved in the process of architectural production and highlight how such values are continuously negotiated among different actors and in different situations. Thirdly, to conclude, the book positions among the multitude of investigations on the fringe of architectural design disciplinary boundaries and, even if in fitful way, sheds light into the implications of reading and understanding architectural practice from other fields of inquiry.

Francesco Carota
Politecnico di Torino

Anne Haila, *Urban Land Rent. Singapore as a Property State*, Chichester, West Sussex: Wiley Blackwell, 291 pp. - 2016
Paperback: \$ 32.44, ISBN 978-1-118-82767-3



"This is a book about land" Anne Haila clarifies in the first line of her volume. Yet it is much more than that: the volume is a call for a comprehensive rethinking of rent theory and mechanisms to capture future rent in our cities. To this end, the author argues that David Ricardo's study of 'land' in association with rent – for agricultural taxation – should be critically updated to an urban world in which factors of production have changed to such an extent that 'land' in the city "was reified into the monetary value of real estate thus blurring the boundary between physical and financial assets" (p. 210). Such condition was made evident in recent financial crises, in which "derivative rents draw land and real estate into a financial game"

(p. 213), although 'money' is used more frequently as an easy explanation for crises. Despite these ambitious propositions, this is also a case study-based book about land, rent, property and state in the very peculiar Singapore city-state. As in other works by Anne Haila, the detailed accounts of local specificities are instrumental to explore critically conventional assumptions about general issues such as the interaction between state and private property and land use right. 'Land' accounts for the social relations affected by laws and customs in which land is embedded. Hence, land matters when occupied by people that are often emotionally attached to it. The book, after a brief introduction to Singapore and a methodological statement that introduces the unconventional way in which 'the case' is utilised, presents a detailed summary of land ideologies as retrospectively regarded from Singapore privileged observation point, multiplying the diverse possible definition of land and focusing on the more transformative ones. Anne Haila keeps Singapore in the background of the second chapter, as a test to her critiques to settled ideologies. Singapore, where state and market are blended and the 90% of land is owned by the state, is not presented as an ideal practice, but rather as the extreme condition in which conventional issues should be redefined. Anne Haila then presents a broad review of Rent Theory, or the relationship between owners and users of lands with the 'naturalisation' of claims over

future revenues, and of Property Rights Theory, declaring at the very beginning her interest in forms of land tenure to explain urban development processes. The argument is recapped in the 'Conclusion', thanks to an epistemological assessment of the land question, the urban question and the rent question, that ends with a pledge for an explicit policy choice on land speculation. Here comes the value of Singapore as a case study. Anne Haila guides the reader into the blend of state and market of the city-state making use of comparisons to other regions of the world to clarify her points and engage into challenging analytical angles without describing too many technical details. Land and real estate stand in a prominent, yet often neglected, position in Singapore's economic success. Indeed, the state has used its land resources monopoly to provide public housing for the majority of the population, and public industrial space for the economy to prosper, also benefiting a successful private development. With the structure of the book in mind, three further considerations should be added. First, the author proposed, in many cases, ground-breaking classifications. Since landownership has become a social issue, for example, a proper classification of land regimes may include not only forms of propriety (shared, leased, private) but also clarifications about the involved relationships, justifications and development modes. Moreover, this operation provides a new dimension for comparisons, the

comparison of causal factors, as the author did in this book, as opposed to macro-level comparisons and micro-ethnographies. Second, the author critically selects Singapore as a case study. Differently from other scholars, Singapore is never meant to be the 'best practice' and it is not only regarded as a single city. It is used to compare land as one causal factor of specific urban development also in Hong Kong, in other Asian cities and European and US cities, proposing interesting insights, remarking obvious and less expected differences and potential parallelisms. Again, in a time in which urban scholars pay more attention to non-Western cities this is a suggestive move.

Third, readers may find in some points that the author considers some pre-knowledge as taken for granted, in particular her well-defined position about property rights theory. To have the whole picture, further readings of her previous works are recommended, as well as a parallel reading of this work together with recent production on the nexus and tensions between neoliberalism, governmentality and the production of space.

Roberta Taramino
Politecnico di Torino



Call

deadline / scadenza
January 30, 2019 / 30 gennaio, 2019

Ardeth #05

INNOVATION AS IT HAPPENS INNOVAZIONE IN PRATICA

Andrés Jaque
Theme Editor | Curatore

Call for Papers For a collective-oriented, non-corporate account of design practices

This call for papers addresses scholars and practitioners dealing with the invention and evolution of the social, that through essay on theoretical argumentation, case studies, and field work attempt to answer the following questions:

1. **What embodiments of politics – can be mobilized or enacted with/by/through innovation processes?**
2. **In what way contemporary notions of innovation become spaces where corporate design and social action can be responded to?**
3. **What is the process by which design and invention emerge as collective realities, exceeding the main stream narratives of individual human entrepreneurship?**
4. **By means of what modes of reconstruction or affection are societies and environments transformed by/through/in design?**

1 - Schumpeter, J. (1939), *Business Cycles: A Theoretical, Historical, and Statistical Analysis of the Capitalist Process*, New York, McGraw-Hill.

2 - Akrich, M., Callon, M., Latour, B. (2002), *The Key to Success in Innovation. The Art of Interesement*, Uxbridge, Brunel University.

5. What is the material dimension of the processes by which techno-societies engage with change?
6. What notions of concern, engagement, activism, care, or improvement?
7. What is the way innovation processes gain accountability?

With 1.2 billion Google results, *innovation* is the omnipresent buzzword that encapsulates the processes by which cultures, materialities, and economies interact and produce evolutions, constraints, and alternatives that rearticulate societies. The human capacity to redesign and effectively intervene in environments, technologies, kinships, bodies, and networks is often highly delegated to a single term: *innovation*. However, with such momentous prerogatives in the making of the societal, the use of the term *innovation* remains kidnapped by simplified, corporate PR rhetoric. Schumpeter's notion of the entrepreneur as the solo agent that brings invention to markets through linear innovation¹ still feeds the naive generalized notion of individual designers and entrepreneurs as the sole agents of innovation. This is a process that, when carefully observed as it develops in specific cases, mobilizes societies at large. It is a process in which non-human entities greatly participate, and one in which its players are affected by unintended, accidental, and inscrutable interactions.

In 2002 Madeleine Akrich, Michel Callon, and Bruno Latour of the Centre de Sociologie de l'Innovation sent out a call to complicate received notions on the role designers and entrepreneurs play by approaching innovation as a collective enactment: "The bringing together of market and technology, through which both inventions *and* the outlets which transform them into innovations are patiently constructed, is more and more a result of a collective activity and no longer the monopoly of an inspired and dedicated individual. The individual qualities of insight, intuition, sense of anticipation, quick reactions, skillfulness, must all be reinvented and reformulated in the language of the organization. They are no longer the property of an individual, but become collective virtues, during the emergence of which the art of governing and managing play a key role."² **This fifth issue of "Ardeth" aims to collect contributions that explore the roles non-humans and ecosystems play in processes of innovation; the participation of the contingent, the environmental, the accidental, and the non-intentional in the emergence of design and invention as socially reconstructing practices; and contributions that help enunciate the way a collective notion of innovation can better explain the way innovative processes are and can be emancipated from corporative hegemonies – how they can be mobilized as embodiments of progressive and inclusive politics, mutual care, engagement, and activism.**

Questa call for papers sollecita contributi sul tema dell'invenzione e dell'evoluzione del sociale, che provino a rispondere alle seguenti domande tramite argomentazioni teoriche ed empiriche.

1 - Schumpeter, J. (1939), *Business Cycles: A Theoretical, Historical, and Statistical Analysis of the Capitalist Process*, New York, McGraw-Hill.

- 1. Quale incarnazione della politica può essere mobilitata/rappresentata con o attraverso processi di innovazione?**
- 2. In che modo le nozioni contemporanee di innovazione possono offrire un terreno di confronto fra *corporate design* e azione sociale?**
- 3. Qual è il processo attraverso il quale il progetto e l'invenzione emergono come realtà collettive, superando le narrative di imprenditoria individualista?**
- 4. Attraverso quali strumenti le società e gli ambienti stanno ricostruendosi e creando sensi di appartenenza verso il progetto?**
- 5. Qual è la dimensione materiale dei processi attraverso cui le tecnosocietà affrontano i cambiamenti?**
- 6. Quali le nozioni di preoccupazione, impegno, attivismo, attenzione o miglioramento?**
- 7. Quale il modo in cui processi di innovazione sono chiamati a rispondere?**

Con 1.2 miliardi di ricerche su Google, "innovazione" è la parola chiave utilizzata per descrivere i processi attraverso i quali culture, materialità e economie interagiscono producendo evoluzioni, vincoli, e alternative che riarticolano la società. La capacità umana di riprogettare e intervenire efficacemente su ambienti, tecnologie, legami intimi, corpi e reti è spesso delegata all'"innovazione". Nonostante prerogative così importanti nel farsi della società, l'utilizzo del termine innovazione rimane però prigioniero di semplicistiche retoriche da PR aziendali. La figura dell'imprenditore veicolata da Schumpeter come attore che apporta innovazione¹ ai mercati in modo lineare e indipendente ancora oggi nutre la nozione generalizzata di progettisti e imprenditori come unici agenti dell'innovazione. È un processo che, quando osservato nel dettaglio, può mobilitare la società alla sua scala più ampia. È un processo nel quale entità non-umane giocano un ruolo fondamentale, e nel quale gli attori sono soggetti a interazioni accidentali, impreviste e imperscrutabili.

Nel 2002 Madeleine Akrich, Michel Callon e Bruno Latour del *Centre de Sociologie de l'Innovation* diffondono una call per complessificare l'idea condivisa del ruolo che progettisti e imprenditori svolgono nell'innovazione, guardando all'innovazione come a un'attuazione/azione/realizzazione collettiva. "L'unione di mercato e tecnologia, attraverso cui sia le invenzioni che le applicazioni che le trasformano in innovazione sono costruiti pazientemente, è sempre più il risultato di un'azione collettiva e sempre meno il monopolio di un individuo ispirato e zelante. Le qualità individuali di intuizione, anticipazione, reattività, abilità, devono essere reinventate e riformulate nel linguaggio dell'organizzazione. Esse non

2 - Akrich, M., Callon, M., Latour, B. (2002), *The Key to Success in Innovation. The Art of Intersement*, Uxbridge, Brunel University.

sono più appannaggio dell'individuo, ma diventano virtù collettive, durante lo sviluppo delle quali l'arte del governo e della gestione vengono a ricoprire un ruolo fondamentale.”²

Questo quinto numero di “Ardeth” aspira a raccogliere contributi che esplorano il ruolo di attori non-umani ed ecosistemi all'interno di processi di innovazione; la partecipazione del contingente, dell'ambientale, dell'accidentale e del non intenzionale nell'affermazione del progetto e dell'invenzione come pratiche di ricostruzione sociale; e contributi che riguardino il modo in cui una nozione collettiva di innovazione può emancipare i processi innovativi dall'egemonia del *corporate* – indagando come tali processi possono essere mobilitati in quanto incarnazione di politiche progressiste e inclusive, votate alla solidarietà, all'impegno e all'attivismo.

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Graphics

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 Lina Maltona
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 Tim Gough
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 and Alessandra Opilio
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Reviews:

Juliet Odgers, Mhairi McVicar,
 Stephen Kite (Ed.),
Economy and Architecture

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The discussion of architecture, with all the visibility of its objects, tends to downplay the invisible flows of money that sustain its production. It is as if the dependency on economic forces is too much to face up to; better then to celebrate the catalytic genius of the architectural hero and then the glorious outputs, and try to ignore everything else that goes on in between. This issue intends to probe the in-between space of the operations of architecture, examining the intersection of the projects of architecture with economies, and with it their associated social and political contexts and implications. It is only through a better understanding of the way that contemporary economics cut across architectural operations that one can learn to deal with these dominant forces in a resistive and transformational manner.