UTOPIA COMPUTER

The »New« in Architecture?

Nathalie Bredella, Chris Dähne,
Frederike Lausch (Eds.)

NETZWERK
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The critical concern of the book "Utopia Computer" is the euphoria, expectation and hope inspired by the introduction of computers within architecture in the early digital age. With the advent of the personal computer and the launch of the Internet in the 1990s, utopian ideals found in architectural discourse from the 1960s were revisited and adjusted to the specific characteristics of digital media. Taking the 1990s discourse on computation as a starting point, the contributions of this book grapple with the utopian promises associated with topics such as participation, self-organization, and non-standard architecture. By placing these topics in a historical framework, the book offers perspectives for the future role computation might play within architecture and society.

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GRAYSON DANIEL BAILEY

Prerequisites for Self-Organization

The Re-emergence of Colin Ward

Underneath specific examples of cybernetic policies in built space, the ideological positioning of "system" and "agent" affects how architectural production in general is organized. Building from an initial connection between cybernetic and anarchist theory in the writing of Colin Ward, this essay uses the two orientations toward non-hierarchical systems to examine a reconstituted architectural field. The conditions of Ward's system-oriented anarchism, and its unprivileged arrangement of system goals, help to examine how architectural subject positions can transition from cybernetic other-organization to anarchic self-organization.

As with almost all dimensions of social and economic life, the proliferation of agencies born from the "democratic revolution" (as defined by political theorists Ernesto Laclau and Chantal Mouffe) has slowly generated a complete instability in terms of architectural self-conception as it relates to objects and systems.[1] In the expanded sphere of agency, one which transitions from focusing on stable hierarchies—objects and structures—into the culmination of hegemonic practices, the spatial role of architecture moved from generating isolated projects into the manifestation of distributed urban effects. Architectural historian Manfredo Tafuri wrote about the turn of urban development in the 18th and

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1   Ernesto Laclau and Chantal Mouffe, Hegemony and Socialist Strategy: A Radical Democratic Politics (New York/NY: Verso, 2014).

19th centuries: "It was no longer a question of giving form to single elements of the city, nor even to simple prototypes. The real unity of the production cycle having been identified as the city, the only suitable role for the architect was as organizer of that cycle."[2] Tafuri's 19th century architects concerned themselves with understanding and directing the distributed agency of the urban system, just as the contemporaneous politician began to understand and direct the distributed agency of the enfranchised public.

Thus, architectural organizing systems can be read as an environment in which architectural and political objects perform their functions, construct subjectivities, and induce affects in the constructed subjects. Within this schema, the architect—assumed provider of architectural production—is not caught up in the urban web, but somehow is extracted and external, pushing and pulling production cycles on some imaginary meta-structural plane. A true organizer above being organized. Of course, this is fiction. Instead, we are enmeshed in the ideologies of systems thinking, just as all other disciplines, professions, peoples. And in this enmeshment, Tafuri makes his more fundamental claims against architecture: we serve the ideology of capitalism; we are not organizers outside of the system, but subjects and production agents within it.[3]

The increasing ebb of political agency in novel forms of democratic, socialist and totalitarian practices—each reacting to the power of a partially enfranchised public sphere—has transformed itself from an arborescent structure balancing the mass of public sentiment against the operations of governance into an unfolded environment of meanings and materials. Laclau and Mouffe describe the hegemonic turn of the "democratic revolution" as the unfolding of a malleable common political meaning based on antagonisms within the public sphere, rather than among concentrated sovereignties, but the outcome of the hegemonic turn has manifested different forms of ideological contestation than

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2   Manfredo Tafuri, Architecture and Utopia: Design and Capitalist Development (Cambridge/MA: The MIT Press, 1979), 107.

3   Tafuri, Architecture and Utopia, 165.

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democracy, socialism or totalitarianism.[4] Instead, the competitive and cooperative field of agency, unable to be coordinated further by structural organizations, has reformed the hegemonic site of contestation as one which focuses on the derivative cultivation or manipulation of recursive agencies within a system.

The development of cybernetics in the post-war era and the system-focuses of Colin Ward's anarchic theories take on particular significance as visions in which social, technological and architectural relations occur under the conditions of enmeshed and competitive agency. Just as the 18th century spelled a turn in the architectural vector toward the expanded urban system, computational organizations define the emergent field in which social and architectural production has already started: a field accelerated and deconstructed into vectors beyond that of democracy, totalitarianism and socialism, into the negotiation of the system-agent relationship via two main ideological frames: anarchism and cybernetics.

As an architect, urban theorist and anarchist, Colin Ward covered a myriad of topics in architectural discourse since the early 1970s in his work. Although only briefly touching on the topic in his 1973 book *Anarchy in Action*, the optimistic link that Ward makes between cybernetics and anarchy traces an early connection between technological, architectural and anarchic organization. In the essay "Harmony Through Complexity" Ward writes, "Anarchy is a function, not of a society's simplicity and lack of social organization, but of its complexity and multiplicity of social organizations. Cybernetics, the science of control and communication systems, throws valuable light on the anarchist conception of complex self-organizing systems."[5]

In almost all of Ward's urban writing, the interaction between "agent" and "system" is of central importance, whether it is the unconsidered social spaces of children in the city or the role of allotment gardens in reforming shared spaces of collaboration and negotiation within a neighbourhood. Between the spaces of

4   Laclau and Mouffe, Hegemony and Socialist Strategy, 138.

5   Colin Ward, Anarchy in Action (New York/NY: Harper & Row Publishers, 1973), 50.

the individual and the social (system), Ward poses cybernetics as a possible vehicle for anarchist thought and organizational strategizing at a time when cybernetic ideology had not defined itself entirely, before its potential was tied to material mass-market logics or coercive organizational outcomes.

Ten years prior to *Anarchy in Action*, the first prominent application of cybernetic policies in architecture took place with the inclusion of the cyberneticist Gordon Pask on the design team for Cedric Price's Fun Palace. Moving the Fun Palace's deconstruction of architectural programming into the realm of cybernetic policy, Pask wrote later that architecture was "only meaningful as a human environment. It perpetually interacts with its inhabitants, on the one hand serving them and on the other hand controlling their behaviour."[6] Cybernetics from thereon understood the utility of architectural design as a form of social engineering, with the architect taking on the role as the most prominent social engineer. The potentials of architectural work, regardless of the architect's professed intentions or artistic applications of style, were becoming the material systems through which individuals could qualify and quantify system goals. When Pask notes the system effects of architecture, he is outlining an interior condition within architectural production that already centres the built environment as producing material economic and social conditions which both "serve" and "control" in terms of organizing bodies and stored economic value. As seen in figure 1, the efficacy of the Fun Palace's cybernetic plan either lives or dies by its ability to foretell, calculate and limit the programmatic actions of the users streaming through space (fig. 1).

Jumping to 2005, the year Zaha Hadid Architects' BMW Central Building opens in Leipzig, Germany, the evolution of socially engineered space has been wholly internalized by architectural offices as one of the discipline's main proprietary offerings. Well beyond the abstraction of cybernetic policy in the Fun Palace, the organization

6   Gordon Pask, "The Architectural Relevance of Cybernetics," Architectural Design 39 (1969): 494.
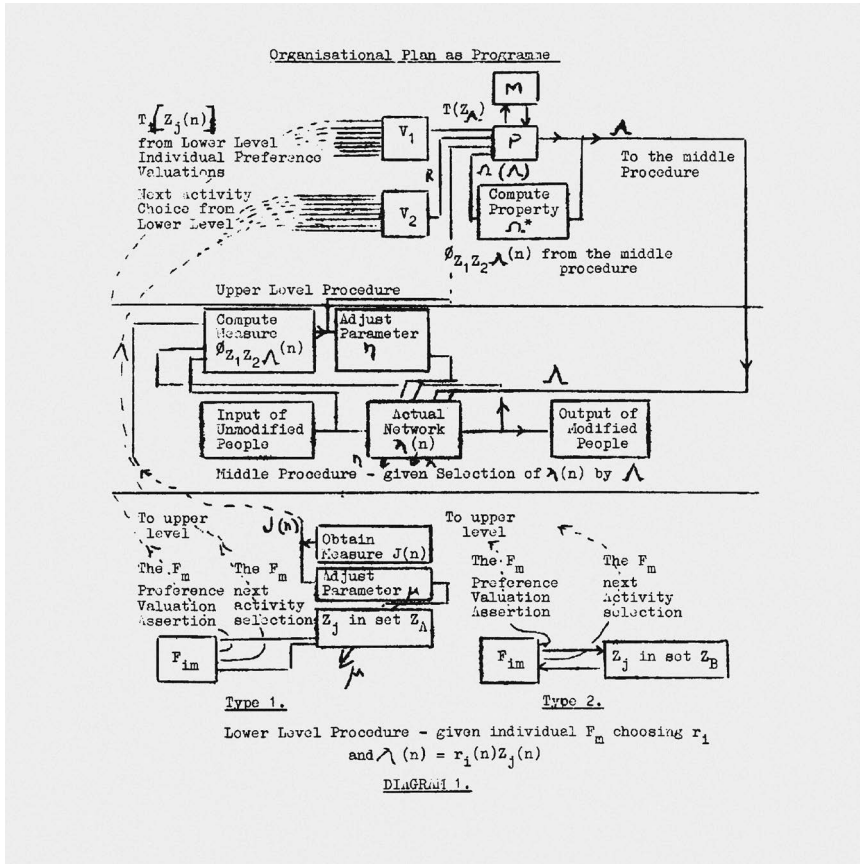
Fig. 1: Cybernetic diagram of the Fun Palace program by Gordon Pask. Source: Cedric Price fonds, Canadian Centre for Architecture

of complex operations in the BMW Central Building offers a refinement of form and material practice, all of which aims to "have a wide range of activities happening together in one space. There's a mix of blue- and white-collar areas, which prevents an exclusive domain from being established."[7] Complex architectural coordinations are achieved through a flattening and homogenization of the

7   Hans Ulbrich Obrist, Zaha Hadid, The
Conversation Series 8 (Cologne: Verlag der
Buchhandlung Walther König, 2007), 64–65.

human agent who bends to consensual materializations of control. These read as solely formal demonstrations of Gilles Deleuze and Félix Guattari's conception of the non-hierarchical smooth spaces of nomadic agency, in contrast to the hierarchically organized and static organization of striated space.[8]

Yet, as Deleuze and Guattari themselves would attest, "smooth spaces are not in themselves liberatory. But the struggle is changed or displaced in them, and life reconstitutes its stakes, confronts new obstacles, invents new paces, switches adversaries. Never believe that a smooth space will suffice to save us."[9] Douglas Spencer describes the momentum of emergent discourses in architecture as moving "towards the affirmation of the emerging cybernetic environment, with its transcategorical forms of knowledge, its entrepreneurial orientations, its celebrations of networked mobility and its promises of self-transcending immersion. Even if unwittingly, it came to serve as the vanguard for the spacing of a neoliberal subjectivity."[10]

In addition, Harun Farocki's *Die Schöpfer der Einkaufswelten* (The Creators of Shopping Worlds) shows how the smooth space of consumer culture develops in the mundane aesthetics and architecture of everyday consumption alongside the projects of the pseudo-avant-garde.[11]

As the cultivation of cybernetic tendencies was happening in architecture, a neoliberal hegemony was simultaneously forming elsewhere, in the economy and in a technocratic understanding of society. In reaction to computer graphics researcher Loren Carpenter's crowd-produced pong experiment, the documentarian and creator of "All Watched over by Machines of Loving Grace," Adam Curtis, has stated: "Carpenter saw it as a world of freedom with order. But I suddenly saw it as the opposite—like

8   Gilles Deleuze and Félix Guatarri, A Thousand Plateaus: Capitalism and Schizophrenia, trans. Brian Massumi (London and New York/NY: Continuum, 1992), 474–500.

9   Deleuze and Guatarri, A Thousand Plateaus, 500.

10   Douglas Spencer, The Architecture of Neoliberalism: How Contemporary Architecture Became an Instrument of Control and Compliance (London: Bloomsbury, 2016), 45.

11   Harun Farocki, Der Schöpfer der Einkaufswelten, dir. Harun Farocki (Berlin: Harun Farocki Filmproduktion, 2001), video.

old film of workers toiling in a factory. They weren't free—they looked like dis-empowered slaves locked to a giant machine screen."[12] Extended by 30 years, social media companies—platforms outside of traditional control structures and lynchpins of the contemporary market—attempt to escape the critique of cybernetic systems, and their derivative forms of manipulation, with cynical pontifications on the lack of hierarchical control, i.e. "free speech." The streams of cybernetic organization and market logic, rather than anarchist practice, have intertwined. Ward's optimism seems misplaced.

In Deleuze's "Postscript on the Societies of Control," the inherent link between control operations within neoliberal economies and cybernetic systems analysis and construction can be easily parsed. Architecturally, the society of control accompanied the transition from Le Corbusier's Plan Voisin to Zaha Hadid Architects' Kartal Pendik Masterplan. Deleuze writes, "Enclosures are molds, distinct castings, but controls are a modulation, like a self-deforming cast that will continuously change from one moment to the other, or like a sieve whose mesh will transmute from point to point."[13] In this context, cybernetics was not the emergent new condition which might reform anarchist conceptions of organization, as Ward thought, but rather a vehicle for the control impulses which were in action well before the tool. Direct design application, and the differentiation of classes in urban structures as within the Plan Voisin, gives way to algorithmic thinking, protocological functions which can either act as points of derivative control or points of mass negotiation—the ideological underpinnings of cybernetics or anarchism.

In this regard, the difference between Ward's anarchist perspective and the perspective of architecture in general is one which

12   Carpenter's pong experiment at the SIGGRAPH '91 conference used two-sided paddles distributed among the audience, which aggregated the movements of pong bars on the respective sides of the crowd. The outcome was a crowd-controlled game, with the speed and distance of bar movement controlled by the distribution of paddle orientations. See

Katherine Viner, "Adam Curtis: Have computers taken away our power?" The Guardian, May 6, 2011. Accessed August 10, 2019. https://www.theguardian.com/tv-and-radio/2011/may/06/adam-curtis-computers-documentary.

13   Gilles Deleuze, "Postscript on the Societies of Control," October 59 (1992): 3–7.

depends on an orientation toward protocol. The anarchist view of organization includes itself within a field of protocol and agency, while cybernetics and the architectural discipline do not. Anarchy involves, and architecture applies—the two strains of "non-hierarchical" systems thinking begin to seem much farther apart than in Ward's initial optimism.

However, the connections which Ward made between cybernetic policy and anarchist practice were not naïve or foolish. In fact, while not actively internalized in cybernetic thinking thus far, Ward's writing nevertheless provides an open avenue for true-ing cybernetics or at least co-opting its logics. Inverting Ward's description of anarchism and cybernetics, one can postulate that *Cybernetics is an operative mechanism, not of a society's complexity and liberation, but of its divisional control and manipulated consensus. Anarchism, the theory of organization without coercion, throws valuable light on a humanist conception of complex cybernetic systems*.

Fundamental to describing any negotiation between anarchist and cybernetic practices, differences among their systems goals must first be laid out: (1) hierarchical value sets vs. equally negotiated values, and (2) constructive versus cooperative operation. First, the hierarchical values of cybernetics starkly prevent any possibility of liberation. The goals of a cybernetic system are various, but the primary goals—hierarchically privileged—are: (a) immediate gains, (b) stability, (c) survival. Even within this set, preferences are made and survival—the propagation of the system itself—represents the most immanent value. While a variety of subsidiary goals are constantly evaluated, their success is inherently tied to the success of the hierarchically privileged goals.

Within a cybernetic analysis of office management, the contentedness of employees is certainly a value, but only in terms of its effect on the continuation of the office, the stability of the office system and its immediate profitability. In the case of labour organizing against management (a situation in which the happiness of employees is often in direct contrast to the goals of management), hierarchically privileged goals determine a course of

action: either the employees are subdued and replaced (allowing a decrease in office stability in order to maintain survival and protect immediate gains), or the employees are bargained with (allowing a decrease in immediate gains in order to maintain stability and ensure survival). At any point, even with a distributed set of values within a cybernetic system, the hierarchically privileged values are what determine courses of action. Within any cybernetic policy, advocating for a termination of the system itself is untenable, as this represents the core antithesis of cybernetics itself: to be controlled rather than to control. In 2020, this was demonstrated by the reaction from local and federal governments against Black Lives Matter protests: when the survival of the system itself is even mildly threatened, the system responds with either overbearing cruelty or incremental sacrifices.

The maintenance of these hierarchically privileged goals marks out another avenue in which coercive action must be internalized in order to produce the conditions for stability, system propagation and immediate gains. Within the Ur-cybernetic model of capitalist production—a network form of cybernetics which overcomes environmental unpredictability by consuming its environment both figuratively and literally—Laclau and Mouffe describe the dynamic between labour-power and the production cycle as a relationship that requires domination in order to extract enough labour-power, which underpins the entire cycle of labour and commodity valuation.[14] In order for capitalist production to be maintained or evolve at all, they argue, domination must exist. Any structure of hierarchically privileged goals must follow suit. If system propagation is dependent on agents within the system, and system propagation is the ultimate form of system validation, the attempted domination of agents is inevitable, since their freedom or equality are only valued in their effect on increasing or decreasing system propagation. In the end, cyberneticist Stafford Beer's economic policy Cybersyn is widely remembered as a prototype of failure because it couldn't propagate as a system, even

14   Laclau and Mouffe, Hegemony and Socialist Strategy, 68.

if its limited implementation was an attempt to avoid traditional styles of economic domination.[15]

In contrast to hierarchical value sets, anarchism involves a set of unprivileged values which are not capable of being completely incorporated into the system—namely the values outlined by the Russian anarchist Pyotr Kropotkin in *The Conquest of Bread*: liberty, equality and solidarity.[16] As Justin Mueller describes, regarding the interaction of qualitative "values" in anarchism: "Rather than a fixed value-slope or hierarchy, these values form a continuum wherein each idea is meaningfully constituted only in association with the others."[17] In effect, there is no final resolution to any negotiation among these values. Instead, the values are constantly repositioned within an infinite horizon of ethical action. The philosopher Simon Critchley characterizes the ethical tenets of anarchism as "not so much organized around freedom as around *responsibility*, an infinite responsibility that arises in relation to a situation of injustice."[18] The expectations of the anarchist system can never be met, just as any teleological project—be it a final system or successful revolution—is incapable of sustaining itself, regardless of how flexibly cybernetic it might be. Within anarchist theory, the lack of terminal stability or guarantee that the state will survive is not a hindrance because system survival as a goal provides only the imperative to find sufficiently coercive forms of system propagation. Similar to the Lacanian and otherwise post-structural agreement that there is no "meta-language" and that all negotiation of the subject and discursive meaning takes place on the same plane, anarchism is a system orientation in which there are no "meta-goals" and all evaluation takes place without priority.[19]

15 Eden Medina, Cybernetic Revolutionaries: Technology and Politics in Allende's Chile (Cambridge/MA: The MIT Press, 2014).

16 Pyotr Kropotkin, The Conquest of Bread (London: Penguin Classics, 2015), 120.

17 Justin Mueller, "Anarchism, the State, and the Role of Education," Anarchist Pedagogies:- Collective Actions, Theories, and Critical Reflections of Education (Oakland/CA: PM Press, 2012), 16.

18 Simon Critchley, Infinitely Demanding: Ethics of Commitment, Politics of Resistance (New York/NY: Verso, 2012), 93.

19 Jacques Lacan, Écrits: A Selection, trans. Alan Sheridan (London: Tavistock Publications, 1977), 311.

The second core difference between anarchist and cybernetic practices concerns constructive versus cooperative operation. Cybernetics constructively "builds up" system architectures and the derivative relations within, while anarchism, as Ward describes, is a process of "uncovering." While cybernetics has a system-view of agent and process units, which interrelate on a blank substrate overseen by an external meta-agent (the cyberneticist, the architect, etc.), anarchism in Ward's explanation is exactly the opposite. Anarchism is the recognition of a rich substrate which already exists, and anarchic practice is about negating coercive control structures and creating forms which preserve the freedom and equity of agents and processes there within. Ward describes this condition as, "A society which organizes itself without authority, is always in existence, like a seed beneath the snow, buried under the weight of the state and its bureaucracy, capitalism and its waste, privilege and its injustices, nationalism and its suicidal loyalties, religious differences and their superstitious separatism."[20]

In stark contrast to the construction of decentralized and layered control networks, as seen in Beer's Viable System Model, the anarchic process does not operate on the positivist structuring of an interactive system, but rather in an unconstrained negative operative model. Instead of decentralized systems ordered around information attenuation and feedback, with the aim of achieving hierarchically privileged goals (system propagation), anarchic process is a practice of limiting the exertion of control and allowing unintentional emergence.

Whereas second-order cybernetics models jump from "organized" to "organizing" systems and focus on streaming data and object sets in order to attain a comparably stable relation among them, anarchism focuses on the limitation and negation of those control methods through the unresolved negotiation among anarchic values and the unconstructed space which separates the system

20 Ward, Anarchy in Action, 18.

21 Heinz von Foerster, Understanding Understanding (New York/NY: Springer Verlag, 2003), 283–286.

and the agent.[21] Ward builds his theories of anarchism on a lineage of classic and early 20th century anarchists, most notably from the foundations set by the German revolutionary Gustav Landauer and the Russian cartographer and evolutionary theorist—the anarchist prince—Pyotr Kropotkin. In Ward's writing the contemporary conception of a systems and process-oriented anarchism is produced as an uncanny mirror image to the network organizations of cybernetic theory in which cooperation is present.

Ward's theories of anarchism specifically stem from Landauer's positioning of the "State" as "not something which can be destroyed by a revolution, but… a condition, a certain relationship between human beings, a mode of human behavior; we destroy it by contracting other relationships, by behaving differently."[22] Landauer's conception of the "State" as something other than a continuous totality precedes both the work of Antonio Gramsci on hegemony and Laclau and Mouffe. What he contributes to a critique of cybernetics is the shift in understanding the "State" as a "state"—a momentary measurement of an emergent system. The "state" of the system is evaluated within cybernetics in terms of how it relates to its internally hierarchical goals: stability, immediate gains, survival. It is thus treated less as an autonomous object than as a system image which must continually be developed. While cybernetics develops the "state" through reinforcement and construction, Landauer's concept of resistance through "state" construction is cybernetic in method and *revolutionary* in practice.

Kropotkin's contribution to Ward's synthesis of contemporary anarchism comes in two forms: faith in the emergent intelligence of the masses, and a scientific understanding of social and biological evolution through the combination of competition and mutual aid. In *The Conquest of Bread* Kropotkin remarks, "Give the people a free hand, and in ten days the food service will be conducted with admirable regularity. Only those who have never seen people

22 Gustav Landauer, "Weak Statesmen, Weaker People!," in Revolution and Other Writings: A Political Reader, trans. Gabriel Kuhn (Oakland/CA: PM Press, 2010), 214.

23 Kropotkin, The Conquest of Bread, 60.

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hard at work, only those who have passed their lives buried among documents, can doubt it."[23] Although, as a classical anarchist and the father of anarcho-communism, Kropotkin approaches the formation of anarchist society from a severely modernist point of view, this faith in the masses and faith in the bottom-agent once "uncovered" from its restraints is central to both contemporary anarchism and any rejuvenated cybernetic policy.

The second central concept from Kropotkin comes through his book *Mutual Aid: A Factor of Evolution*, which revises the often misconceived evolutionary process of "survival of the fittest," claiming that mutual aid among species within a community and environment was a central feature of the evolutionary process.[24] Contesting the analogies of the capitalist market and its suggestion that cut-throat competition produces elevated results, Kropotkin's focus on mutual aid provides a scientific basis for the theory of anarchism's "uncovering." If mutual aid and beneficial mass organization is already rooted in environmental and biological practice, any object-network system will unavoidably include mutual aid; every evolving system involves solidarity.

Ward's anarchic processes thus take on an understanding of relation rather than structure, and produce a set of anarchic conceptions in which the interplay of relations can avoid authoritarian rule. First, there is a clear understanding that anarchism, as a relation-based distributed system-network of processes, agent, and objects, is fundamentally in opposition to coercion. Already historic cybernetic policy fails in this regard, because it bases most of its methods of system propagation on feedback in order to coercively stabilize an acceptable environment. Instead of a myopic cybernetic model on stability, an anarcho-cybernetic model must start to provide ways of validating or escaping the system.

In order to facilitate an environment without coercion, Ward's anarchism operates on two shared foundations: free association and modes of legitimation/delegitimation (fig. 2). Free

24   Pyotr Kropotkin, Mutual Aid: A Factor of
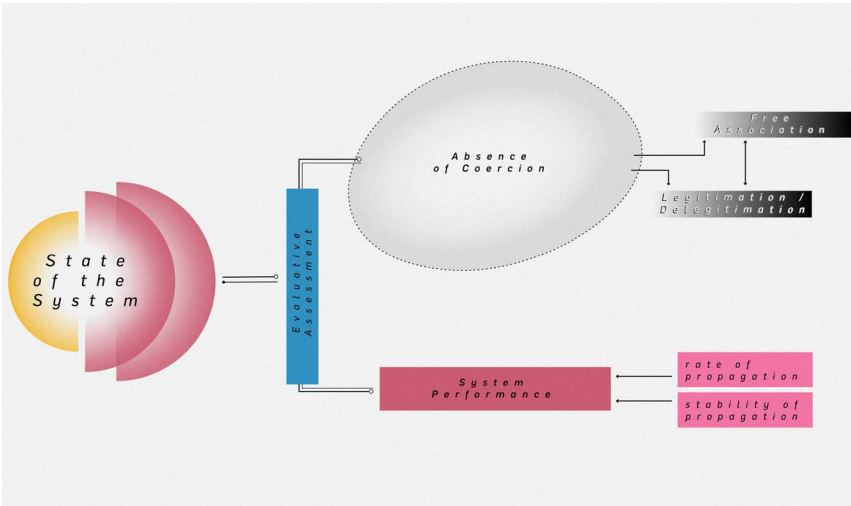Evolution (Boston/MA: Extending Horizons
Books, 1914).

Fig. 2: Evaluative differences between traditional cybernetic and anarchic values. Source: image by author

association, which Kropotkin notes was formed by the first federations of corporations in Europe, is an open logic which resists being subsumed by active or derivative control systems. "What is of importance to us," Kropotkin writes in *The Conquest of Bread*, "is this: The agreement between hundreds of capitalist companies to whom the railways of Europe belong, was established without intervention of a central government to lay down the law to the divers[e] societies; it has subsisted by means of congresses composed of delegates, who discuss among themselves, and submit proposals, not laws, to their constituents. It is a new principle that differs completely from all governmental principle, monarchical or republican, absolute or parliamentarian. It is an innovation that has been timidly introduced into the customs of Europe, but has come to stay."[25] Ward makes a similar argument regarding international postal agreements, in which states freely associate on a transnational level, a rare example of international anarchic unity which has recently been questioned by the US government.[26] But the point is that one may withdraw

25 Kropotkin, The Conquest of Bread, 127.   26 Ward, Anarchy in Action, 53–54.

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from these free associations, regardless of whether it is in one's personal interest or not.

Importantly, modes of legitimation and delegitimation provide a constitutive check on the propagation of a system or its characteristics. While Beer and Pask (and cybernetics in general) each conveniently ignore the possibility of interior antagonisms within cybernetic policy, the absence of antagonisms—agents and processes which actively or intentionally degrade the mechanisms of the system—only makes cybernetics more utopian and idealistic than any form of anarchism. The general reaction to a lack of antagonisms in cybernetic policy has been speculation about how cybernetic systems can react in order to negate the antagonistic source: search, augment, and destroy. This idea is central to the Marxian crisis-theory of capitalism.[27]

However, anarchism prioritizes the ability of agents and processes to delegitimize a portion or entirety of a system based on bottom-level acceptance. In this way, Ward's enthusiasm for a potential anarchic and cybernetic overlap is merited. The inclusion of anarchic principles to validate cybernetic processes and outcomes, and the ability of free association and modes of delegitimation within a system is an infusion of distributed agencies which are held to standards beyond that of survival and stability.

In *The Architecture of Neoliberalism*, Spencer notes that, "What architects want from complexity are rules of governance. Organizational truths located in an irrefutable materialism. The 'laws' of natural systems and the 'orders' of complexity."[28] Architects want meta-planes from which to organize the systems they create, even as Tafuri's critical declarations remain. In architectural production, the potential for radical contestation through the understanding of, interaction with, and implementation of complex systems is already present, but the discipline is currently incapable of divesting from its imaginary role outside the control system. Instead of continuing to propagate our own versions of derivative coercive networks via the standard ideology of

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27 Karl Marx, Theories of Surplus Value (London: Lawrence & Wishart, 1951), 368–402.

28 Spencer, The Architecture of Neoliberalism, 67.

cybernetics, or creating alternative control methods, the interlacing of anarchic principles with cybernetic processes as described by Ward suggests an alternative potential in our work as organizers, researchers, and architects.

Concluding *Anarchy in Action*, Ward reminds us that "Anarchism in all its guises is an assertion of human dignity and responsibility. It is not a programme for political change but an act of social self-determination."[29] This practically rhymes with the ethical declarations of the contemporary architectural studio, but remains entirely distanced from the material practices of the discipline. Architectural production already operates inside a cybernetically-composed system, one which depends far more on the differences of zeros and ones in market algorithms than it does on the "phenomena" of space or the interest of the users it internalizes. Gentrification, the maven and harlot of urbanization, is not a confusing aberration or the effect of a system which spontaneously displaces populations and values or devalues land, but a central characteristic and sign of systemic success. The capacity of architects to ignore the role of their profession is profound, and certainly deserves an in-depth critique, but for the moment this feigned confusion can be tied to the architectural subject position and its assumption of system overview—the very assumption of the cyberneticist.

The connection between cybernetic and anarchic outcomes in architectural production requires a reorientation of field and repositioning of the architect as internal to the machinations they assume to oversee. This strain of thought has emerged in the last decade of architectural discourse, as seen in the organization The Architecture Lobby and in the writing of Spencer, Peggy Deamer, and Manuel Shvartzberg.[30] However, the focus on architectural labour hits a wall when it solipsistically generates its own criteria for what architectural labour comprises, without addressing

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29 Ward, Anarchy in Action, 137.

30 Particularly, Deamer's organization and contribution to *The Architect as Worker* (2015) comes to mind, along with Matthew Poole and Manuel Shvartzberg's organization of *The Politics of Parametricism* (2015).

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the larger systems within which it operates. Throughout *The Art of Inequality: Architecture, Housing, and Real Estate*, the authors show how entrenched the architectural discipline is in systems of value and how little agency it has to negotiate the conditions of that value, regardless of the "architectural" labour involved.[31]

Further, it is important to remember that in all of the outcomes of contemporary architectural production, "Value, the [one] thing they have in common, is not a measure of their usefulness."[32] This condition does not change with an emphasis on "interdisciplinary" action, nor does it change through collaborations with non-profit organizations. Creating antagonisms which allow for freer forms of negotiation, popular legitimation and popular delegitimation will come through reconceiving and possibly abolishing the architect's position within the system. Architectural objects in specific locations calcify and store capital, and thus are assumed to create value, even while the value that they have calcified comes from a generational and collective heritage of labour and habitation. Kropotkin remarks, "Who, then, can appropriate to himself the tiniest plot of ground, or the meanest building in such a city, without committing a flagrant injustice? Who, then, has the right to sell to any bidder the smallest portion of the common heritage?"[33]

There is no internal escape within the current cybernetic (control) paradigm. Only an external escape, which must extricate the architects from their privileged position as overseers and dissolve them into mere agents being organized. If architectural production is to be socially and systemically positive in view of the values it so chronically vomits out into ineffectual prose, there must be a better conception of how the system can work agonistically, without a hierarchical privileging of economic value. Perhaps then the architect might realize that most "architectural" decisions are made by client developers and state officials, and

31 Reinhold Martin, Jacob Moore and Susanne Schindler, eds., The Art of Inequality: Architecture, Housing, and Real Estate (New York/NY: The Temple Hoyne Buell Center for the Study of American Architecture, 2015).

32 Prole.info, The Housing Monster (Oakland/CA: PM Press, 2012), 8.

33 Kropotkin, The Conquest of Bread, 78.

that free association is also beneficial to the professionals who design beautiful client presentations for decreasing returns. Rather than continuing the work of Pask by internalizing sub-systems of analysis and control within the building, the digital model, or in geometric algorithms, the only positive reaction of architectural production to the current conditions of cybernetic ideology is to actually come to terms with the system we are in—one which contains no meta-planes and one in which there is no neutrality. If we are participants of the cybernetic model called "Empire" as supposed by Michael Hardt and Antonio Negri (as well as their anarchist opponents in the radical French journal *Tiqqun*), we cannot focus on encoding fluid conditions into private-public-commercial space within the urban centre, nor to endeavour toward the end of robotic labour, but rather on the acceptance or abandonment of the system positions we hold.[34] The real question is whether the architectural discipline truly wants responsibility within the immanent cybernetic ideology and whether they want the market to change at all.

Comfortingly, even if the discipline does not want to change, there is still the possibility of uncovering antagonisms (and developing forms of Mouffe's "agonistics") which traditional cybernetics does not recognize.[35] Ward himself accepts the limits of discipline while proposing another path: "I do not subscribe to this view [that architects can internally reform the system in which it participates]: architects, like teachers, are victims of 'role-inflation' and we cannot expect more of them than that they do their job competently, though in the course of doing so they may very well become 'anti-architects' in the same way as some very competent and thoughtful teachers become 'de-schoolers'."[36]

Cybernetically there can be no problematization of position once internalized—and the architect is thoroughly internalized—but

34 Michael Hardt and Antonio Negri, Empire (Cambridge/MA: Harvard University Press, 2000). Tiqqun, This is not a Program, trans. Joshua David Jordan (Cambridge/MA: The MIT Press, 2011).

35 Chantal Mouffe, Agonistics: Thinking the World Politically (London: Verso, 2013), 9.

36 Colin Ward, "Introduction," in Vandalism (London: Van Nostrand Reinhold Co., 1974), 14.

anarchically, the anti-architect is capable of contestation. In the face of dualling system ideologies, any progress toward political "emergence" in architectural production must come through the re-emergence of Colin Ward and his frustratingly optimistic vision of the anarcho-cybernetic project.

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The critical concern of the book "Utopia Computer" is the euphoria, expectation and hope inspired by the introduction of computers within architecture in the early digital age. With the advent of the personal computer and the launch of the Internet in the 1990s, utopian ideals found in architectural discourse from the 1960s were revisited and adjusted to the specific characteristics of digital media. Taking the 1990s discourse on computation as a starting point, the contributions of this book grapple with the utopian promises associated with topics such as participation, self-organization, and non-standard architecture. By placing these topics in a historical framework, the book offers perspectives for the future role computation might play within architecture and society.