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A Container and Its Contents

Re-Reading Tomás Maldonado's *Design, Nature, and Revolution: Toward a Critical Ecology* (1970, trans. 1972)

Over the last couple of centuries, the larger design and engineering trends of which architecture is a part have tended to rob architecture of its control of the typology at the center of the discipline, the room. This old story, presaged by Brunel, Edison and Marconi, becomes more pressing by the year. As I write, I send words from here in my study to somewhere out there, into virtual space, while music is piped in through a connection to BBC Radio in London, 7,000 miles distant. The space of my quite carefully designed California ranch house, which was already inclined by Californian architecture's embrace of nature to interact with the natural environment, is further vitiated by particle waves in the way greeted by László Moholy-Nagy, and by conduits in the way described by Reyner Banham in *The Architecture of the Well-Tempered Environment* (1969). In essays like "The Great Gizmo" of 1965, Banham further wondered aloud whether the box was still needed or wanted in the age of the transistor radio.¹

Banham's project for a "gizmology"—one which, I believe, remains incomplete—arises in the 60s and 70s at the zenith of the technology-box dialectic, as architects explore the problem up to and including the

possibility of all loss of architectural autonomy to a wider, all-pervasive eco-technical environment. Charles Moore, designer of exquisite Bachelardian phenomenological boxes, could not help but see that the larger order of American life was on the freeway.² Moore, again writing in 1965, implied another project that remains incomplete, for a design history that joins up architecture's inside and outside, private and public, the autonomous and the contingent, static and mobile space, the critical and the instrumental. It's to this era of history, theory and practice—this era of Archigram's *Walking Cities* and Nicholas Negroponte's cybernetic *Architecture Machines*³—that advanced scholarship has increasingly returned in the last couple of decades as a way of confronting the possibility that architecture will become merely a nodal point, lost to the tangle of infrastructure and media undergirding late capitalism.

To capitulate or resist? It's a political problem, not simply a technical one, in which nature—which used to constitute the “outside” of the “room”—becomes replaced by technology. That makes it an epistemological shift, no less, with the ascent of an environmentalism modeled on systems theory and cybernetics (climate change, for example, is treated in sustainability discourse as a design problem within a global system). The box, then—the architectural bunker—is tacitly hailed in recent scholarship as the (last) space of reason, feeling, and critique in a world surrendered to feedback and product. In this framework technologists, quasi-architects, and anti-architects like Banham and Richard Buckminster Fuller mark one end of the spectrum, with Peter Eisenman placed at the other end in recognition of his re-instatement, since the 1960s, of *l'architecture pour l'architecture*. Most of the rest of us shuffle dialectically between these points, I assume.

And to understand something of the origin of this shuffle, we can return to a handful of books written at the beginning of the seventies which are perhaps not quite as well known as we think they are.

Here, I would like to re-read Tomás Maldonado's *Design, Nature, and Revolution: Toward a Critical Ecology* (published in Italian in 1970 and translated in 1972), because Maldonado attempts to resolve the room-technology problem at its meta-levels. Maldonado—the Argentinean artist, industrial designer, theorist, and faculty member at Princeton and the Ulm School of Design—remains, I think, a semi-hidden hand in ongoing critical debate about architecture's fate since the ecological, technical and political revolutions of the 1960s, and it's more nuanced and ambivalent on re-reading than I recall. Maldonado provides this summary as the central realization motivating the architectural experiments of the sixties. In it, something like the box and technology relationship becomes a trope of human history:

Our relationship with the environment in which we live is comparable, say, to the relationship between a container and its contents, each of which has developed independently of the other. ...And yet there is no doubt that here the container and the contents, the human condition and the human environment, are the result of one and the same dialectical process, one and the same process of mutual conditioning and formation.⁴

Suppose we were to instate Richard Buckminster Fuller's writings as a "keynote" of post-war radical architecture, the call to approach the world as a giant unitary container without boxes—a cry to which all neo-avant-gardes reacted directly or indirectly—then we might conceive of Tomás Maldonado as a "responder." This is because Maldonado, writing just after the euphoric peak of the New Left and countercultural wave around 1968, jettisons inspirational writing for an unsentimental, brief, erudite and systematic consideration of design and politics.

The systematization by Maldonado begins with his title, in such stark contrast to the poetry of Fuller's title of the same year, *I Seem*

to Be a Verb (1970). Maldonado sifts through the ecological web to find a simple triangulation of the ecological relationship between design, nature and revolution. In short, he boils ecology down to another politics—another moment in modernism’s history of reform. He introduces the word “critical” not in the systems-analysis sense of Fuller (as the sequence determining the minimum time needed for an operation—see, for instance, his book *Critical Path* of 1981) but in its dialectic sense, as he analyzes the merits and faults of design.

By repositioning 1960s vanguardism within historical materialism, Maldonado takes us to what he thinks of as the philosophical nub of architecture: management of the relationship between “Environment, Nature, Alienation” (to borrow the title of Maldonado’s first chapter). If the industrially-designed world promises to improve the human condition at the expense of estranging us from ourselves and nature, might the polarity be reversed so that design reintegrates the world? Fuller turned designers toward engineering in his attempt to answer this most ambitious of all design questions. Maldonado turns engineers back toward political philosophy. Fuller is extraordinarily scant in his references to politics. Maldonado counters with an energetic philosophical and sociological book list, ranging from Aristotle to Hegel and Marx, from the anarchism of Rosa Luxemburg to the sociology of Max Weber and Talcott Parsons, and forward to Antonio Gramsci and to the Frankfurt School. It is a book list familiar to participants in humanities and social science graduate seminars to this day.

Indeed, Maldonado had set out with nothing less than the ambition of writing “a complete, systematic book on the present state of methodological research in the field of environmental design and planning,”⁵ and perhaps he comes a little closer to that goal than he realizes. The book remains an extraordinary snapshot of the state of architectural debates at the end of the 60s, a prodigiously footnoted

taxonomy of the shockwave delivered to the design disciplines by the post-War ascent of systems theory, the disaster of the Vietnam War, the decline in the reputation of reason, the linguistic turn (and first glimmers of postmodernism), the student revolutions and the return of utopianism. Above all, Maldonado's work emphasizes the narrative of the perceived ecological crisis, one that was wrought by the intertwined "scandal of nature" and "scandal of society"—in short, industrialization's two-century assault on nature and the attendant reorganization of social relations. But with the introduction of this vocabulary of outrage, Maldonado recognizes that his systematic book has become a "polemical essay."⁶ So it stands as a moratorium on the very possibility of design as a beneficial force in the world, and though long-since out of print, remains a significant touchstone for leftist design scholars tackling ecological problems and the counterculture.

Maldonado's dialectical method leads him to locate a "flagrant contradiction" with which design struggles between the "relatively mature" technologies at society's disposal (this a year after the first Apollo moon landing, for instance) and the "absolutely immature" "decision-making centers of power in our society."⁷ In short, design has the technical power to improve the human condition, Maldonado finds, but is bereft of the political planning it needs; or, to put it another way, Maldonado issues a memorandum on design and ecology as integral to historical materialism—as facets of the question about how humans collectively manage the material necessities of life. This theme of "management" and "planning" allows Maldonado to read systems theory and politics as *complementary* approaches to the study of the fate of nature and society, rather than as mutually exclusive or antagonistic (as we tend to regard them in our own neoliberal day). In this way, the book is a synthesis of the countercultural dialectic of science and politics. Near the beginning of the book, indeed, Maldonado flatly claims that:

The scientific approach to the problem of the ‘human environment’ brings us to the central preoccupation of philosophy after Hegel. Briefly, it is concerned with rendering more intelligible the role of a consciousness confronted with a stubbornly contingent and situational reality. And it is a reality we no longer wish to think about categorically, but rather as a function of the problem within all our problems: the conflict between freedom and necessity.⁸

Maldonado identifies the strengths and weaknesses of the most *outré* of the design proposals of the 1960s: systems, megastructures, and symbolism. Systems analysis and cybernetics had the advantage of offering a big-picture understanding of the environmental relationship between the container and the contained, Maldonado seems to concede, but its positivism dangerously substitutes the “fetishism of models” for measured political analysis, a “bourgeois coldness” (that at an extreme point resulted in the runaway militarism of technocrats like Robert McNamara). One paragraph sounds a note of caution about the attempted countercultural appropriation of systems theory of the sort exemplified by the *Whole Earth Catalog* (1968) or, perhaps, by the activism of Ant Farm:

‘Bourgeois coldness’ presents itself at first in the guise of smiling detachment. There are those who think that the antidote to smiling detachment is smiling revolution. Such unexpected behavior might take bourgeois coldness by surprise, and cause it to react in a premature and disorderly way, revealing its true nature. But the effect of this antidote, even in those cases where it works, is often fleeting and ephemeral. Worse yet, it can have a negative effect: to force a masquerading mentality such as this one to reveal its true nature before the right time might encourage certain groups to give their open adherence and assent, before the right time, to repressive

acts of authoritarian power, thus fostering the intensification of those repressive acts and the consolidation of that authoritarian power.⁹

This analysis leads to Maldonado's reassessment of recent "traditional" utopias of the sort seen in megastructures of all stripes—utopian, all, in their efforts to meet all needs with a single solution. At the head of this stream was the "luxuriant and futuristic cosmogony" of Buckminster Fuller "which, though not always coherent, is nevertheless more productive than the pallid 'zoom' literature of his acolytes"¹⁰—by which we can assume Maldonado is demeaning London's Archigram group, and its own 1960s followers in France, Austria, Italy and the United States. Maldonado joins countless other commentators on sixties utopianism, then and since, to contemplate Fuller's iconic 1960 rendering of a Dome over Manhattan, seeing it as exemplary of "suboptimal" solutions, technically feasible but almost certainly of no use in remodeling habitat.¹¹ The central weakness of these utopias, of course, was the absence of politics—the failure of the megastructure movement to partner its vision of sophisticated technique with a model of mature decision-making. "In other words design and planning would be called in to substitute for politics, to abolish it and cancel it from history."¹² This was the case even in the heart of the body politic, Maldonado finds, as he studies the State of California's employment of systems engineers under Governor Edmund G. Brown (father of Governor Jerry Brown).¹³ Californian engineers showed the efficiencies gained by integrating white collar work into the home, an efficiency gained at the expense of isolating people and making them "manipulable."¹⁴ Perhaps it was with such critiques as Maldonado's in mind that in his 1972 film *Reyner Banham Loves Los Angeles* Banham *praised* the fact that so many Angelinos still lived within walking distance of their workplaces along Wilshire Boulevard.

Banham was a proponent of Pop, for which Maldonado reserves his greatest ire. Maldonado, himself a semiologist, detects a corruption of the science of signs in the literary and architectural paeans to Las Vegas by Tom Wolfe, Robert Venturi and Denise Scott Brown. "It is not out of cultural puritanism, but because of our abiding faith in critical consciousness that we simply cannot accept Las Vegas as an example of 'richness of meaning'...Contrary to what Venturi thinks, after a certain point 'more is less.'"¹⁵ By which point Maldonado has largely recused himself from all the best-known programs to meet the crisis of planning in the 1960s. His response is, broadly speaking, dialectical: finding that Venturi and Scott Brown's error is to assume that a populist non-planning is the logical response to the perceived failure of reductionist planning, Maldonado demands a *better* planning that capitalizes on *all* the contradictory directions of the crisis in design, as though to reconcile the analytical and political potential of systems theory, utopianism, revolutionary insurgency, and semiology alike. He writes, "... environmental design and planning must have the task of making order; its function is ever that of bringing ordered complexity back to systems which are always and by their very nature tending toward disordered complexity."¹⁶ Planning—management—is critical reason, in this scheme; it is design, it is politics, it is ecology.

At least, that is the conclusion toward which the book seems to edge, a sort of manifesto without a manifesto. Addressing Venturi to the right and young revolutionaries like Rudi Dutschke to the left, Maldonado writes, "Politically speaking, the revolutionary sense of dissent is really only attainable through design. Dissent that rejects hope in design is nothing but a subtle form of consent. ... The discussion of nondesign is an intellectual luxury of consumer society."¹⁷ Maldonado is willing to risk being accused of "conciliation" with that existing society by attempting, in effect, to work with the tools it provides: thus a note of pragmatism

(or praxis, to lend it a sense of political consciousness) enters the frame, and he talks of reconciling pragmatism with idealism.¹⁸ His immediate intellectual support comes from Ernst Bloch's magisterial three-volume study of utopia published between 1938–1947 and translated into English in the 1950s, *The Principle of Hope*—an influence on the student protest movements of the 1960s, as well.

Of outstanding importance to Maldonado is Bloch's description of the "concrete utopia." "Abstract utopia is fantastic and compensatory" (in Ruth Levitas's summary), whereas "Concrete Utopia...is anticipatory rather than compensatory. It reaches forward to a real possible future, and involves not merely wishful but will-full thinking."¹⁹ Maldonado prioritizes the concrete over the speculative, as, surely, does any designer. And yet the book ends with nothing concretized, a sleight of hand that, if anything, deepens the book's legacy because it remains open. On the one hand, Maldonado provides an obituary to the 1960s utopian moment. In this, it is comparable, as Maldonado notes, to Jean Baudrillard's 1970 address to the Aspen Conference.²⁰ On the other hand, something of the concrete utopia, of willful thinking, persists in design four decades on: Maldonado seems to have been looking past the then-formative "language games" of Venturi and Scott Brown's postmodernism to a "critical" and "projective" turn in architecture that would emerge in the 1990s and 2000s, though probably not in a form Maldonado could have imagined. On close analysis, few of those critical and projective practices, which have drawn heavily on the technologies of data analysis and CAD, boasted a clearly articulated political program, preferring that the forces of a larger (post)modernization shape the box. And perhaps Maldonado unwittingly instated a general, vague, left-leaning "critical consciousness" as a sufficient "praxis." Whatever the tacit Gramscianism of the critical designer,²¹ the business and institutional pedagogy of design was allowed to carry on largely undisturbed. "When a designer—

for example, an architect—is persuaded that he can contribute as a designer to the transformation of society, he can act in that direction only to the extent in which he believes in a relative innovative autonomy of his work.”²² “Bourgeois coldness” was successfully recuperated, then, and the “scandals” Maldonado described remain. His prescience on the fate of zity” in which all architecture students are schooled—is especially chilling: “The best way to remove a subject from public attention (or at least from public interest) is to force everyone to be concerned with it continually.”²³ But to the degree that the book’s legacy remains open, of course, it can be constantly revisited by each generation of designers confounded by the ecology of design, nature, and revolution.

Maldonado’s distance from the “smiling revolution” of ecological euphoria—one that we associate particularly with West Coast counterculture—might be explained first by the distance of his Latin American heritage from the United States (he was born in Buenos Aires in 1922); second, by the relative remove of his teaching appointments (at the Hochschule für Gestaltung [HfG], Ulm, 1954–1966, and at Princeton’s School of Architecture, 1967–1970) from the revolutionary fervor of Berkeley and Paris; and third, by his continuing allegiance to European philosophical traditions.

Reason is central to *Design, Nature, and Revolution*, just as it is central to the so-called Ulm Model of design education developed under Maldonado’s theory-driven 1956 rectorship at the HfG; one which destroyed his friendship with the HfG’s first director, Max Bill, who wanted design to preserve expression and be based in the studio rather than in the seminar room. First published in Italian, the book has the sense of a careful assaying, or stocktaking, as Maldonado struggles to reconcile his political and scientific allegiances. “I should like to emphasize that a large part of the essay has been written as a response—for better or for worse—to the ideas stirred up recently by

the revolutionary movement of revolt among the young,”²⁴ he explains as he revisits and qualifies his interest in systems theory (clearly wrestling with his contribution to semiotics) and perhaps tacitly atoning for his leadership in West German consumer product design.

It would be easy to over-determine Maldonado as oppositional to ecological vanguardism whereas, he notes, “The concept of the ‘human environment’ originates on the one hand in modern philosophy, and on the other in the revolutionary contributions of ecological science.” Aside from his horror at the polemical, Prankster-ish libertarian individualism of the hippie right—Maldonado quotes a Timothy Leary dystopian intervention at length—Maldonado seems keen to bring counterculture at large into the fold of a mainstream modernism. A modernism which had, over the previous century, assimilated any number of odd and questionable ideas rather than focus on the naiveté of ecological designs hatched in the absence of rigorous political critique or the naiveté of revolutionary intent without concrete aims.²⁵

A cursory 1972 *Kirkus* review of the book as “a scrappy, stream-of-consciousness exposition” effectively dismissed it as being of no great interest to a wider readership. “Praxiology of design,’ ‘the reality of mesocosmos,’ ‘the dialectics of the concrete,’” scoffed the *Kirkus* reviewer, imitating Maldonado’s own use of language: “—talk about ‘semiological abuse!’” Literary stylistic criticism aside, though, the *Kirkus* reviewer was missing a rare opportunity to listen to a designer talk candidly about his trade’s most profound ambitions. Maldonado’s slender 74-page intervention endures historically (perhaps only Manfredo Tafuri’s *Progetto e Utopia*, first published in 1973 and then translated in 1976 as *Architecture and Utopia*, is as significant a moratorium on the architecture of the sixties) because it serves as a meaningful primer for the quandaries of design and design history today. That’s because designers, four decades later, are still likely to find it harder to imagine

working outside that tangled and reciprocating web of technical, political and environmental factors studied by Maldonado or, more generally, by a figure like Michel Foucault.

The very distinction between the box and technology, between container and its contents, seems rather utopian, and in an *abstract* utopian rather than *concrete* utopian way. Maldonado urged that design is part of a larger totality which it's possible for the designer to approach consciously, politically, critically, and yet without the delusion that the design discipline really does inhabit a room, some bunker that affords its denizens a special, privileged, more politically committed and critical understanding of the world superior to and autonomous from that available to inhabitants of the tangled ecology at large. Not at all. Design is all caught up with manufacturing and interactive media; its operations are more like pragmatism than praxis, as affinitive to market- and systems-oriented nudges as they are to agonistic politics. Its operations are as politically instructive for non-designers to observe as they are for designers to execute. And this is possible, in part, thanks to the relative openness, alone among the university-trained professions, with which designers wrestle with conscience—this, the *Kirkus* reviewer overlooked.

[Endnotes]

1. See Reyner Banham, "The Great Gizmo," *Industrial Design* 12, September, 1965, 48-59.
2. Charles Moore, "You Have to Pay for the Public Life," *Perspecta* 9/10, 1965, 57-106.
3. See Nicholas Negroponte, *The Architecture Machine: Toward a More Human Environment*, Cambridge, MA: MIT Press, 1970.
4. Tomás Maldonado, *Design, Nature, and Revolution: Toward a Critical Ecology*, Turin: Giulio Einaudi, 1970, trans. US ed. Harper & Rowe, 1972, 7.
5. *Ibid.*, ix.

6. Ibid., x.
7. Ibid., x.
8. Ibid., 4.
9. Ibid., 19.
10. Ibid., 28.
11. Ibid., 47.
12. Ibid., 29.
13. Ibid., 48.
14. Ibid., 49.
15. Ibid., 64.
16. Ibid., 66.
17. Ibid., 30.
18. Ibid., 73.
19. Ruth Levitas, "Educated Hope: Ernst Bloch on Abstract and Concrete Utopia," *Utopian Studies*, 1:2, 1990, 13-26, 14-15.
20. See Maldonado, *Design, Nature, and Revolution*, Postscript, ftn 2, 133.
21. Ibid., Chapter 16, ftn 2, 127-130.
22. Ibid., 74.
23. Ibid., 76.
24. Ibid., x.
25. Ibid., Chapter 16, ftn 11, 131-132.