

## book review

Osman, Michael. **Modernism's Visible Hand: Architecture and Regulation in America.** University of Minnesota Press, 2018

Tyler Morgenstern

With the 19th Century drawing to a close and the US body politic still reeling from the cataclysm of Civil War, a peculiar new set of techniques for making order in an otherwise volatile world began to coalesce in American homes, offices, and laboratories. Skewing from conventional understandings of the built environment as exclusive of “the elements,” an emergent generation of architects began to imagine a more porous, though still orderly, relation between interior and exterior. In *Modernism's Visible Hand: Architecture and Regulation in America*, Michael Osman offers a lively glimpse into this world-in-the-making, tracking the emergence of *regulation* as a distinct mode of architectural thought and practice. Joining other recent efforts to nuance the historiography of US architectural modernism such as Jeffrey Lieber's *Flintstone Modernism* (2018), *Modernism's Visible Hand* approaches regulation as a malleable set of infrastructural, technical, and interpretive operations by which postbellum US architects transformed the brick-and-mortar structure into a dynamic apparatus that did not so much exclude as modulate and mediate the elements, charting new meanings for “home, market, nature, and labor” (Osman 2018, xix) in the process. Richly archival and amply illustrated, the project amounts to an effort to rethink the ‘modern’ in modern architecture; to cast it not as “the embodiment of an idea about a new society,” but as an *enterprise*, “constructed

through intersections of management with technology and physical infrastructure that operated on the environment and the economy to constrain the errors and deviations endemic to a society invested in growth” (Osman 2018, viii)

Osman's sojourn through regulation is, by necessity, eclectic. This has as much to do with the heterogeneous conditions under which the practitioners of regulatory design worked as it does with the idiosyncratic pathways charted by regulatory technologies themselves. As in the case of the thermostat, which was initially designed to control temperatures on the factory floor but ultimately saw much wider adoption in the domestic sphere, Osman's chosen technologies often prove unexpectedly charismatic, exceeding the intentions of their creators and taking on new aspects as they shuttled across disciplines, institutions, and applications. Chasing these unwieldy itineraries, Osman traverses a wide range of seemingly unrelated spaces that, taken together, evince a “broadening interest in tools for managing dynamic change” (Osman 2018, 127). In Chapter One, for instance, readers pass through Catherine Beecher's proto-feminist efforts to reimagine the domestic interior as a regulatory system in which ventilation and temperature control mechanisms would help to transform the “middle-class house into a testing ground for the reform of homemaking” (Osman 2018, 21). In Chapter Three, Osman turns his at-

tention to the embryologist Charles Zeleny's *Vivarium*, a facility on the grounds of the University of Illinois at Urbana-Champaign where a complex climate control apparatus afforded Zeleny "an unprecedented level of control" over the simulated biotic environments at the heart of his experimental practice (Osman 2018, 110). Osman, however, construes regulation not as mere pretence for laying brick, but as a potent *representational* technology in itself, a means of visually formalizing worldly processes that might otherwise escape managerial capture. Thus does he assimilate the mathematical work of Carl G. Barth—a key figure in the deployment of Taylorist production principles in the US steel industry—to the regulatory. "Collecting the variables of the production process in plots, diagrams, and slide rules," Barth "translated the core elements into the neutral abstraction of numbers," rendering them available to "increasingly rigorous" forms of managerial order (Osman 2018, 142).

Moving across these disparate domains, Osman constructs regulation as a transportable, scalable design principle that offered architects a means of thinking the relations between environment, technology, and management anew in response to often idiosyncratic demands and aspirations. Particularly for those readers adjacent to architecture proper, this concept work is perhaps the book's key contribution. One might even read *Modernism's Visible Hand* as an account of the transitional space between Foucault's disciplinary society and the Deleuzian society of control. If the disciplinary society was organized around a series of clearly delimited enclosures (the school, the factory, the prison) within which specific discourses of truth and value consolidated, in the society of control, such enclosures had all but eroded. By the end of the 20th Century, Deleuze argues, the vaporous entity known as the corporation had already largely replaced the factory, and endless 'skilling' programs were well on their way to doing the same with the school. This transition did not, of course, entail the end of power. Rather, it signalled the emergence of a world in which power asserted itself not through so many physical walls and barricades but through the everywhere-and-nowhere matrix of digital code. In such a world, the Open no longer signifies disorder. As Wendy Chun has shown, it rather maps almost point for point to control: if disciplinary power was "visible, yet

unverifiable," in the control society, code renders power "invisible," such that prohibition increasingly appears in the guise of freedom (Chun 2008, 7-9). With *Modernism's Visible Hand*, Osman puts some empirical flesh on this conceptual joint, showing how regulatory architecture wound interior and exterior, the controlled and the contingent, into complex new arrangements.

The result was a variety of built environments that retained something of the logic of enclosure—here and there Osman's case studies betray an abiding allegiance to a mode of civic and corporate monumentality that dramatizes the disciplinary dream of a rationally ordered social body—yet nonetheless embraced a repertoire of proto-cybernetic organizational precepts that shifted the accent from the production of normality to the *inducement of order*. Indeed, it is difficult not to read Barth's efforts to transform the factory into "a time-based and mutable *form*" (Osman 2018, 130) as unwitting prologue to Deleuze's gaseous corporation, where labor, compensation, and organization are held "in states of perpetual metastability," subject to modulation without end (Deleuze 1992, 4). Or consider, further, Osman's fascinating account of the development of modern cold storage facilities in Chapter Two. In place of the massive ice blocks that dominated earlier forms of cold storage, the facilities that Osman considers—one in Chicago, the other Boston—boasted elaborate cooled-water piping arrays that allowed managers to regulate interior temperatures with remarkable precision. In these facilities, perishable commodities like meats, fruits, and vegetables were synchronized with the rhythms of the market. As Osman writes, modern cold storage emerged primarily out of an effort to make such perishables available to the futures trading market at a time when futures were themselves understood as regulatory mechanisms capable of stabilizing the boom-bust cycles endemic to capitalist exchange. By holding temporarily at bay the perishable commodity's natural tendency to spoil, wither, and rot, cold storage opened a hiatus between initial sale and fulfillment of order, creating a window within which the purchase contract could be speculated on and resold. Not an enclosure in any strict sense, then, the modern cold storage facility was rather a built technology for inducing order at the otherwise turbulent overlap between unregulated exchange and unchecked biotic decay.

With such analyses, Osman offers scholars in a variety of disciplines fecund resources with which to reframe a range of contemporary research agendas. Those who interrogate the foundations of ecological thought in the shadow of the Anthropocene, for instance, will find value in Osman's account of how regulatory precepts torqued accepted methods for representing, modelling, and ultimately building into and around natural phenomena. Similarly, and as hinted above, historians of cybernetics and its afterlives will uncover in Osman's work a parallax view on such familiar concepts as feedback, homeostasis, and control. Locating these and similar constructs in proximity to an historiographic corpus that extends well beyond the annals of computer science and electrical engineering, Osman raises for the historian of media and technology some compelling methodological questions. What, for instance, might it look like to narrate the emergence of the Society of Control not through code, the network, or related figures, but through the aesthetics of built space, or through environment? Finally, Osman's understanding of the deeply social character of technical systems will appeal to the many in media and science and technology studies presently developing critical approaches to the study of logistics and infrastructure.

## References

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