



PRINT FEBRUARY 2019

## FORCES OF NATURE

GRAHAM BADER ON THE ART OF THOMAS STRUTH



Thomas Struth, *Stellarator Wendelstein 7-X Detail, Max Planck IPP, Greifswald, 2009*, C-print, 62 1/2 × 81 7/8".

WHILE NO ONE who has spent time looking at Thomas Struth's photographs would be surprised to learn that he studied painting (he was a student of Gerhard Richter's at the Kunstakademie Düsseldorf), his *Stellarator Wendelstein 7-X Detail, Max Planck IPP, Greifswald, 2009*, appears almost as if intended to advertise this fact. The image presents the Stellarator as a spatially disorienting tangle of cables, pipes, and ducts that resembles nothing so much as a Jackson Pollock. In subtly mimicking the earlier artist's intricate compositions, Struth's photograph invites us to see its titular device as equally a work of sublime human ingenuity and organizational intelligence, one whose singular meaning, like that of Pollock's best paintings, is contained in the impeccably woven thicket of its individual parts. Yet just as Pollock's canvases are most forceful in their testament to the inevitable failure of any longed-for autonomy (perfectly encapsulated in the fractured name of perhaps his greatest work, *One: Number 31, 1950*), so Struth's own title flatly declares his subject to be a purpose-driven technical artifact, one whose real significance is precisely *elsewhere*—in the calculations that drove its construction and continue to guide its operation, and in the specific research ends it serves.<sup>1</sup>



Thomas Struth, *Hot Rolling Mill*, Thyssenkrupp Steel, Duisburg, 2010, C-print, 71 1/4 × 83 1/2".

The Stellarator uses magnetic fields to confine superheated plasma in an attempt to generate a sustained nuclear fusion reaction. At least, such is my Google-facilitated understanding. The photograph itself does little to aid such comprehension. Looking at it, I have *no idea* what any of the instrument's thousands of components—some encased in plastic bubble wrap, others glistening in their recently forged perfection—actually do, or how any of them relate to one another. What I *do* know is that they compose an apparatus of incredible complexity and purpose (as well as beauty), and that if no one person can tell me just what every element here is doing, some assemblage of human knowledge has managed to develop, construct, and put to use this overwhelmingly intricate device. And the research it makes possible, I suspect, may very likely have profound effects for life on earth.



Adolph Menzel, *Das Eisenwalzwerk (Moderne Cyklopen)* (The Iron-Rolling Mill [Modern Cyclops]), 1872–75, oil on canvas, 62 1/4 × 100".

*Stellarator Wendelstein 7-X Detail, Max Planck IPP, Greifswald* is from the artist's series "Nature & Politics," 2007–, currently on view in an exhibition at the Fondazione mast in Bologna, Italy. Beginning with shipyards and massive apartment districts, the series has expanded to include research labs, Disneyland, industrial production sites, and medical procedures and spaces: In all cases, environments and devices that have been built to ensure their individual parts produce a specific end effect, from mass housing and entertainment to carefully calibrated chemical reactions. The images, we could say, are tableaux of human intentionality as fueled by the entwined capacities of organizational ingenuity and means-end rationality. And because these human faculties find their most concentrated amalgam in high-tech instrumentation, it is *technology* that dominates the series—in whose structures and spaces, Struth suggests, we witness nature and politics' most powerful coalescence.



Thomas Struth, *Acropolis Museum, Athens*, 2009, C-print, 78 1/4 × 62 7/8".

Technology, in Struth's images, is at once utterly familiar and categorically unknowable—an epistemological deadlock that is a defining characteristic of industrial and postindustrial modernity, and that is driven by the subsumption of once-comprehensible things into increasingly complex manifolds that exceed the understanding of users and makers alike. For Martin Heidegger, writing in 1938, technology objectified the world's particulars by subjecting them to calculated systemization, thereby rendering them unfathomable apart from their function within the "calculating, planning, and molding of all things."<sup>2</sup> The quintessential instantiation of such thinking, Heidegger argued, was research science, whose processes and goals established nothing short of a metaphysics of the modern era, which he termed the "Age of the World Picture":

“Ongoing activity in research is a specific bodying-forth and ordering of the systematic, in which, at the same time, the latter reciprocally determines the ordering. Where the world becomes picture, the system, and not only in thinking, comes to dominance.”<sup>3</sup>



Thomas Struth, *Chemistry Fume Cabinet*, the University of Edinburgh, 2010, C-print, 47 1/2 × 65 3/8".

In “Nature & Politics,” Struth presents concretizations of just this condition: He pictures the age of the world picture, the shape of human thought itself. The achievement of his images is to realize an interweaving of the technological and the aesthetic not in the form of celebratory beautification—“the art of science,” as it were—but by isolating and distilling, with an undogmatic eye, both the world-making force and the meticulous imaginative drive instantiated in the devices and environments he shows.

**Technology, in Struth’s images, is at once utterly familiar and categorically unknowable.**

From Anaheim, California’s plastic mountains to the labs of Berlin and Greifswald, Germany, to seas of housing blocks in Seoul and Ulsan, South Korea, Struth views our present through a wide-angle lens. And in interrogating what unites these disparate sites—their shared rootedness in a mode of thinking that has subsumed nature and politics alike—he directs his gaze into our past as well. Disney’s grand amusement park, after all, opened its doors in 1957. And the heavy industrial equipment captured in Struth’s magnificent 2010 photograph *Hot Rolling Mill, Thyssenkrupp Steel, Duisburg*—showing a still-operational plant that opened amid West Germany’s postwar “economic miracle”—echoes *Das Eisenwalzwerk (Moderne Cyklopen)* (The Iron-Rolling Mill [Modern Cyclops]), 1872–75, Adolph Menzel’s iconic image of early industrial labor.<sup>4</sup>



Thomas Struth, *Mountain, Anaheim*, 2013, C-print, 6' 11 1/2" × 10' 10 7/8".

Struth's *Acropolis Museum, Athens*, 2009, which portrays Bernard Tschumi's then-new structure sprouting from ancient bedrock, reveals the full historical reach of this critical vision. In its fusion of contemporary and ancient, the photograph betrays a curiosity about humanity's desire to hold sway over nature that spans millennia, encompassing that process so powerfully outlined in Max Horkheimer and Theodor Adorno's 1944 masterwork, *Dialectic of Enlightenment*. Horkheimer and Adorno's dialectical scorcher, published a decade before Struth's birth, traces the deep origins of the modern instrumental reason that Heidegger theorized by pointing to Greek myth's foundational anthropomorphism, in which "the creative god and the systematic spirit are alike as rulers of nature" and all creation is subordinated to the calculating drive of human intelligence.<sup>5</sup> "What men [*sic*] want to learn from nature," they write, "is how to use it in order wholly to dominate it and other men."<sup>6</sup> Essential to the triumph of such instrumentalized reason, for Horkheimer and Adorno, is the eradication of "any trace of its own self-consciousness," since such self-awareness would disrupt the totalizing drive of its world-making impulse. It's just this self-consciousness that the "Nature & Politics" series realizes, guided by a systematic intelligence—and utilizing a process—that is itself rooted in the very condition under investigation.

Struth's photographs—shot on eight-by-ten-inch negatives, scanned for digital editing, and printed in color on sheets that may be more than ten feet wide—allow particulars to proliferate and resonate in such a manner that the scenes they comprise are opened up with an often startling complexity—revealing, again and again, a technological world that is remarkably handmade, almost scrappy. In *Stellarator*, we see not just seamless mechanical assembly but copious warning notices, myriad bits of tape and bubble wrap, and a forlorn glove awaiting its user; beneath Ulsan's housing monoliths, we spot piles of trash and ramshackle shops; and in his stunning *Semi Submersible Rig, DSME Shipyard, Geoje Island*, 2007, one of the series' earliest works, we are confronted with an overwhelming array of pictorial incident on and around its monumental titular apparatus—most notably, the elaborate foreground weave of cables and chains, which both diagrams the picture's own perspectival construction and challenges the most sophisticated linear abstraction, from László Moholy-Nagy to Tomás Saraceno.

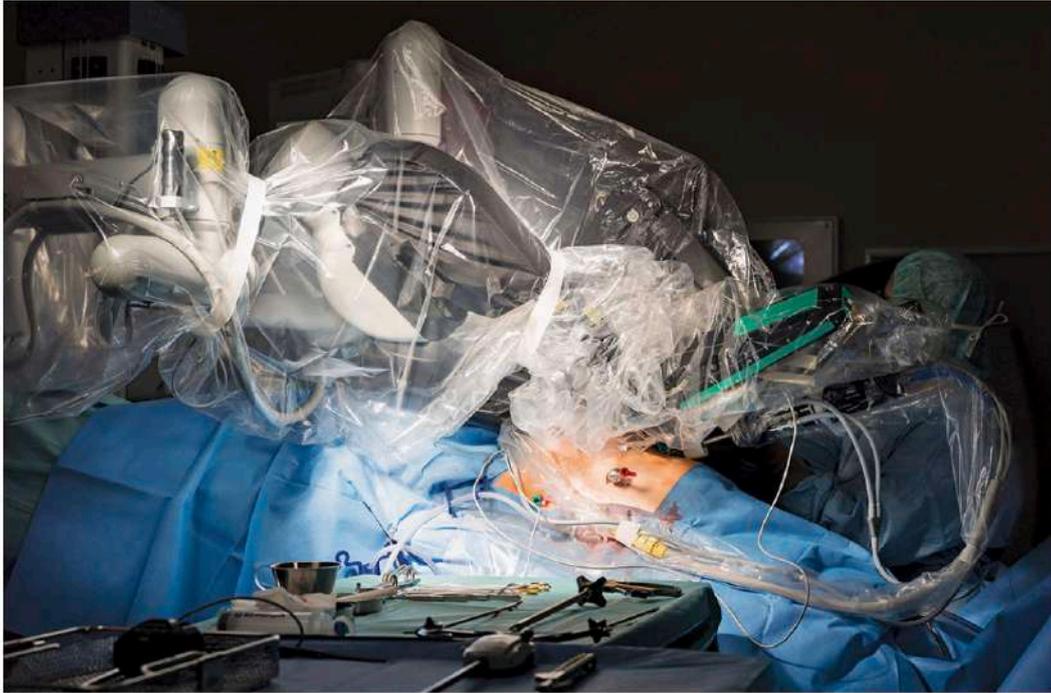


Thomas Struth, *Semi Submersible Rig, DSME Shipyard, Geoje Island, 2007*, C-print, 9' 2" × 11' 5 3/8".

**These notations are reminders of the excesses and imperfections—above all, those of the body's own processes and desires—that lurk at the heart of technological reason.**

Such details highlight the inevitable mismatch between objective plan and subjective experience, nowhere more powerfully than in *Chemistry Fume Cabinet, the University of Edinburgh, 2010*. Here is a mix of mad scientists' equipment and funfair balloons, all contained within a protective case whose glass front is covered in hand-scrawled structural formulas and graffiti: j'ai mal au nez (my nose hurts) at center; an almost alphabetical list of countries that begin with *U* at lower left. A guiding throughline of "Nature & Politics" is literally writ large in these notations. They are reminders of the ever-present material excesses and imperfections—above all, those of the body's own processes and desires—that lurk at the heart of technological reason.

Human beings, nearly absent and yet ever present, are revealed by such images to be the ultimate subject of Struth's series. We see things people have made, environments they inhabit, artifacts and traces they have left behind. We do, if only occasionally, see figures themselves—vacationers at Disneyland; lab workers in their white uniforms (*Pharmaceutical Packaging, Laboratorios Phoenix, Buenos Aires, Argentina, 2009*); two men messing with their bikes amid the foreground clutter of *Semi Submersible Rig, DSME Shipyard, Geoje Island*. And in one anomalous photograph, *Aquarium, Atlanta, 2013*, Struth makes a gaggle of kids and parents his explicit subject, capturing them before a transparent wall of fish whose various positions, sizes, interactions, and colors mimic those of the assembled crowd. A clear cousin of Struth's earlier museum studies ("Museum Photographs," 1989–2005), the aquarium photograph finds Struth shifting his focus from culture to nature—or more precisely, to nature as culture, put on display and ready to hand.



Thomas Struth, *Figure, Charité, Berlin*, 2012, ink-jet print, 35 1/4 × 51 3/4".

The most startling human presences in “Nature & Politics,” however, are the operating-table figures Struth has photographed at Berlin’s Charité hospital. Barely visible within the assemblages of cords, tubes, monitors, straps, machines, and plastic sheaths that enwrap them, these bodies invert the series’ overriding figurative program: Rather than presenting technological devices as isolated concretizations of human thought, they show human beings—specifically, *unconscious* human beings—seemingly mummified by technology. Equipment here is less product than protector of the people it serves, who appear devoid of agency, almost incidental. These pictures are an obscene intensification of the broader technological dynamic we ourselves experience daily: From automatic soap dispensers to self-driving cars, autocorrect to algorithmic search engines, we increasingly expect machines to do things for us. Our devices are not becoming an extension of man, as Marshall McLuhan had it; we are becoming extensions of them.



Thomas Struth, *Aquarium, Atlanta*, 2013, C-print, 6' 9 3/4" × 11' 8 1/2".

**Struth photographs with a picture maker's eye rather than a critic's judgment—and it is precisely this openness that generates the series's potent critical force.**

The dual pinnacles of this trajectory are contemporary bioengineering and the burgeoning internet of things. In one, science mutates the human to fix potential problems in advance (witness the scandal this past November over the genetic editing of twin babies); in the other, our devices independently communicate with and learn from one another with no need for human participation—and in the process continue the long technological reordering of agency itself. More fundamentally than either of these developments, however, the topic that lurks within all of Struth's images is the politics of nature in an age of accelerating climate change. The warming of earth is arguably instrumental reason's most destructive product and, as a problem to be solved, potentially its greatest contemporary project. And in both of those senses, it permeates the "Nature & Politics" series from its first image to its most recent. Our inability to avert increasingly certain catastrophe is rooted, of course, in a more pointed formulation of these titular terms—the nature *of* politics—and is fueled by the fact that human desire, even in the face of global disaster, is more difficult to contain than hot plasma, melted steel, or the reactions taking place in any chemistry lab.

Struth understands this; the interrogatory gaze driving "Nature & Politics" is thoroughly without prejudice. He photographs sites of research, inhabitation, and industry with a picture maker's eye rather than a critic's judgment—and it is precisely this openness that generates the series's potent critical force. Captured by Struth as sublimely intricate concretizations of human creative intelligence, these all-too-human environments are also the sites at which our world's future shape, both natural and political, will be determined.

*Thomas Struth's "Nature & Politics" is on view at Fondazione MAST, Bologna, Italy, through April 28.*

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#### NOTES

1. A similar comparison could be made between the contained linear forms of Struth's *Distillation Column, Gladbeck, Germany*, 2009, and the work of Piet Mondrian, whose compositional universe appears, in the later photograph, as if come to life and actively metastasizing.
2. Martin Heidegger, "The Age of the World Picture" (first presented as a public lecture in 1938), in *The Question Concerning Technology and Other Essays*, trans. and ed. William Lovitt (New York: Harper Perennial, 1977), 135.
3. Heidegger, 141.
4. Another connection to Menzel is suggested by Struth's *Space Shuttle 2, Kennedy Space Center, Cape Canaveral, USA*, 2008, whose collection of mobile stairs and platforms and ceiling-pressed figures recalls the nineteenth-century painter's splendid *Kronprinz Friedrich besucht den Maler Pesne anagoria* (Crown Prince Frederick Pays a Visit to the Painter Pesne on His Scaffold at Rheinsberg), 1861. In regard to the aura of industrial labor that permeates his ThyssenKrupp image, Struth, in conversation, compared its barren shop floor to the stage setting for a Brecht production: The connection seems spot-on.
5. Max Horkheimer and Theodor W. Adorno, *Dialectic of Enlightenment*, trans. John Cumming (New York: Continuum, 1972), 9.
6. Horkheimer and Adorno, 4.