Opposite page: **Eric Owen Moss Architects, Beehive, 2001, Culver City, CA.** Photo: Tom Bonner.

Above: **Frank Gehry, Danziger Studio and Residence, 1965, Hollywood, CA.** Photo: Kathlene Persoff.

City of Dust

DAVID GISSEN ON ARCHITECTURE AND SUBNATURE IN LOS ANGELES

Ecological crises are everywhere, and it is precisely this pervasiveness, this immersion, that a growing number of artists and architects today aim to address—delving into the complex interchange between our built environment and the natural world. A range of exhibitions on view this summer, such as MoMA PS1's "EXPO 1: New York," probe the potential of participatory art practices to address environmental concerns; while this year's "Pacific Standard Time" initiative, organized by the Getty Research Institute, focuses on architecture in postwar Los Angeles—a city famously dogged by the severe pollution that resulted from its specific historical and geographic circumstances. *Artforum* invited architectural historian DAVID GISSEN to reflect on the relationship between LA's architecture and its environment, revealing the latter's profound, if often little understood, influence on the city's urban landscape, its gleaming towers and industrial wastelands.

Left: **Pelli Clarke Pelli Architects, 777 Tower, 1990, Los Angeles.** Photo: Carol M. Highsmith.

Above: **Amy Balkin's *Public Smog* (detail), 2004–,** mixed media, dimensions variable.

Opposite: **Frank Gehry, Danziger Studio and Residence, 1965, Hollywood, CA.** Photo: Kathlene Persoff.

The subnatural lurks below even the most immaculate facades of LA: It is everywhere to be found if one wants to look.

LOS ANGELES IS DEFINED less by its skyline than by its *sky*—the actual air that hovers above the city. Indeed, the smog-capped basin surrounding LA has long provided a perversely iconic image of the metropolis, along with the urban and environmental conditions beneath it: the ecology of the concrete-channeled Los Angeles River; the interstices of the city's congested highways, postindustrial factory precincts, and polluted harbors. All these denigrated elements have featured prominently in countless chronicles of the city over the past half century, many of which deftly mix environmental and spatial history. They appear, too, in critiques of the city's environmental politics—particularly in battles over the uneven distribution of the city's contaminated atmosphere and the future of its primary river. And they have influenced LA's broader cultural production as well, prompting practices that attempt to analyze and transform the city's environment through a diverse array of artistic and even bureaucratic strategies.

But the interaction between these environmental conditions and the city's architecture is less obvious, perhaps because LA's ecology diverges so drastically from typical theorizations of architecture's relationship to the natural world. Indeed, Western architecture has historically been defined in relation to the idea of nature as divine, beautiful, or pastoral. Late-seventeenth-century Rome, for example, could be described as an epicenter of *supernatural* architecture: Its Baroque aesthetics were characterized by spatial invocations of the otherworldly, ranging from images of clouded heavens to figures of winged deities. In the early nineteenth century, London and its surrounds were the center of a *natural* architecture, characterized by an aesthetic of the picturesque that relied on often sentimental invocations of a world of innocuous and comfortingly familiar flora and fauna.

In contrast, we might see postwar LA as one of the epicenters of *subnatural* architecture.[1] What I call a subnatural architecture attempts to negotiate a milieu that is less than natural, one potentially threatening to human existence as we know it and therefore to the material formations and ideas that constitute architecture as we typically conceive of it. Subnatures are those forms and processes of nature—or the human corruption of it—deemed filthy, fearsome, or uncontrollable: smoke, dust, garbage, rust, exhaust, gas, smog, debris, overgrowth. And LA, of all places, is unthinkable without these untamed and abject forces. The subnatural lurks below even the most immaculate facades of the city: It is everywhere to be found if one wants to look.

And yet we have almost always understood LA's modern built environment as a "clean" architecture, suppressing any underlying murk. The buildings that flourished in LA in the decades preceding and immediately following World War II—the Case Study House program of John Entenza, the modernism of William Perreira and Victor Gruen, or the futurism of John Lautner—were predicated on seemingly pollution-free forms and discourse. To the extent that modernism considered nature at all, it was as the source of (presumably pure) light, space, and air.

But the subnatural atmosphere of LA could not be ignored for long, and late modernity in Southern Californian architecture was ultimately defined less by the attempts to merge interior and exterior that had characterized so many of the Case Study houses and other postwar icons than by efforts to seal off interiors from their polluted surrounds, as in the work of the so-called Silvers. This moniker was coined in the 1970s to describe the work of architects such as Cesar Pelli and Anthony Lumsden, who developed buildings sheathed in reflective coated glass. They responded to the type of setting theorized more recently by Peter Sloterdijk as "atmo-terrorism"—a phrase the philosopher uses to describe an external world so compromised, harsh, and even hostile, so as to necessitate a violent separation between it and a highly regulated interior environment. In the case of LA architecture, the term *Silver* clearly denoted the slick skins of this work but also the wealth of the clients who commissioned it, hinting that responding to atmospheric impurity through isolation and withdrawal was a strategy available only to a few.

In time, a group of emerging architects countered the Silvers. Designers such as Frank Gehry, Thom Mayne, Michael Rotondi, and Eric Owen Moss attempted to integrate subnature into the seemingly sanitized forms and discourses of modernism. This subnatural project was an intellectual one, too: Various writers, historians, and critics—Reyner Banham, Peter Plagens, Mike Davis, John Chase, and Kazys Varnelis—aimed to interrogate the more hostile aspects of LA's "nature" as a critical component of its environmental history. They described the city's

Subnature is both biological matter and technological material, nature and industry, organic dirt and synthetic seepage.

Frank Gehry, Danziger Studio and Residence, 1965, Hollywood, CA. Photo: Kathlene Persoff.

architecture and its surroundings as "industrial," "grunge," "noir," "trashy space," "dead tech," "freakology," or even "gangster," capturing the city's louche, postapocalyptic decadence and subversion.[2] And in all their aberrant experimentation, the designs of Gehry, Mayne, Moss, and others revealed the ways in which subnature encompasses both the natural *and* the man-made: Subnature is both biological matter and technological material, nature and industry, organic dirt and synthetic seepage.

LA has not been unique among American cities in confronting pollution, of course. But it has an especially curious and troubling environmental trajectory: LA's smog problem was exacerbated by the geographical features of the basin within which it sits and the city's sprawling, car-centric patterns of development. As US cities deindustrialized in the '70s, '80s, and early '90s, air quality began to improve in most of them. But this was not the case in LA, even as its urban landscape was becoming increasingly defined by the detritus of former industry. This underlying paradox, in which the symptoms of postindustrialization developed while contamination levels remained constant—or even increased—was absorbed into the city's architectural language.[3]

If the Silvers' architecture repressed this deleterious context, subnatural architecture treated the pollution in the air and the industrial wastelands on the ground as material to be assimilated as both form and subject matter. Frank Gehry's 1965 house and studio for graphic designer Louis Danziger, for example, is a peculiar and paradigmatic attempt to relate to LA's derogated milieu. This simple series of large, rectangular volumes—a work space, residence, and walled garden with textured stucco surfaces—has been posed as a progenitor of Southern Californian "sculpturism"—a style influenced by the forms of contemporaneous sculpture. Its mute volumes, set against a commercial street of storefronts, evokes both LA Minimalism and Pop—an engagement with artistic practices that has continued to be a crucial part of Gehry's work. But the austere design is also an early experiment in responding to urban pollution. While there is an entire LA vernacular of stucco boxes, extending back to the work of Rudolph Schindler and Richard Neutra, here the stucco's placement, texture, and color were specifically developed to anticipate the building's imminent degradation from the adjacent busy boulevard. Gehry used rough, blown-on stucco in a dismal gray, eliminating the need for frequent repainting as the wall became filthy from the street traffic and air.[4] The coarse texture approximates the encrustation of smog particulates on a building surface, while the color matches the staining that results. The outermost wall rests on a pedestal-like concrete foundation that renders the structure akin to an iconic, if contaminated, sign—a literal rendering of an architecture immersed in, rather than positioned against, subnature.

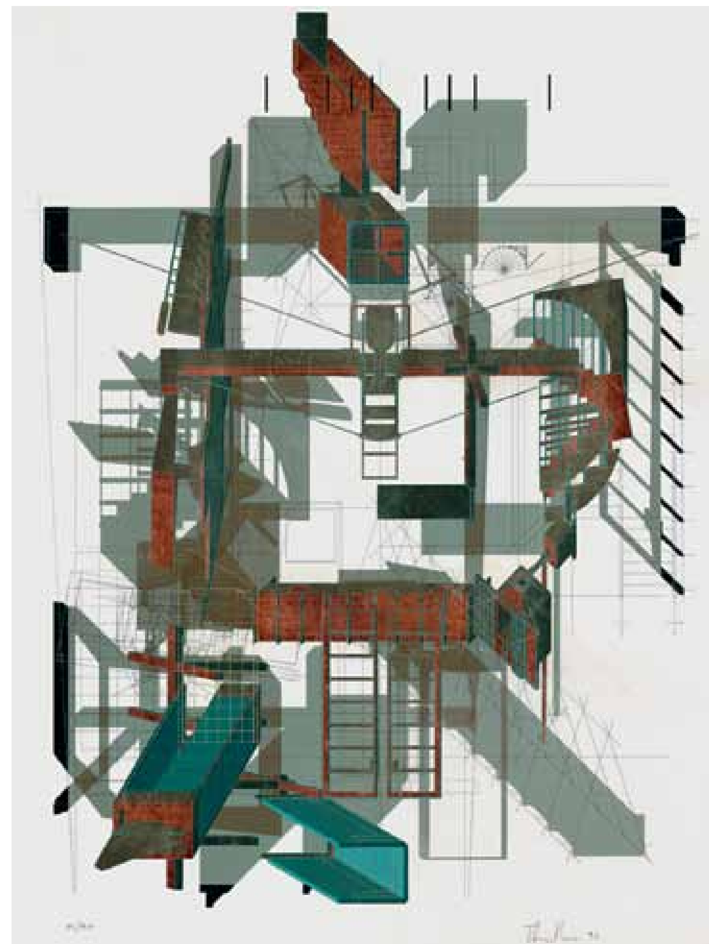
Gehry's transformation of smog into signifier was unmistakably tied to postmodern architecture's emphasis on representation. Indeed, even such a canonical postmodern project as Robert Venturi and John Rauch's 1963 Guild House in Philadelphia explored the semiotic potential of pollution. The building is a housing facility for the elderly, completed shortly before the Danziger Studio and Residence, and, like it, is essentially a boxlike form facing a similarly busy urban street. It exemplified the landmark concept Venturi, Denise Scott Brown, and Steven Izenour would later describe as the "decorated shed," a building in which all ornamentation and symbolic reference is compressed into the two-dimensional facade, turning the edifice into a kind of billboard. Here this surface is dominated by brown brick, which Venturi, Scott Brown, and Izenour claimed was "darker than usual" in order "to match the smog-smudged brick of the neighborhood."[5] Through the use of dirt-tinted brick, the Guild House represents pollution as an aspect of what its designers called the "ugly and ordinary" embedded within the building's surrounding social and cultural history. By contrast, in the Danziger Studio, car exhaust is an immanent aspect of a dynamic environment. Both buildings transform environmental impurities into a form of architectural representation, but for Gehry, smog is a powerful and active component of the surrounding city that will ultimately transform architecture, while for Venturi, it is historical—an almost sentimental reference to a disappearing industrial past.

THE DANZIGER STUDIO became a key work in two legendary spatial and environmental analyses of LA: Banham's *Architecture of Four Ecologies* (1971) and Davis's *City of Quartz* (1990). Within these histories, Gehry's project functions as a barometer of geographical reconfigurations afoot in contemporary LA, yet each narrative voiced a markedly different interpretation of its stucco face. Banham focused on the Danziger Studio as a type of realism, praising the stucco as an appropriate choice for its environment and noting that in contrast to a modernist glass wall, "the stucco is heavily rough-cast to provide a surface that can absorb the dirt of a heavily used thoroughfare without becoming streaky."[6] The critic saw this absorption as part of the "as found" aesthetic of Brutalism—an aesthetic approach that exposed the city as it was, versus how it might be idealized. Davis, on the other hand, positioned the work as a cruel ruse, a critical component in the gentrification of the city he called "Fortress L.A." For Davis, the Danziger Studio was a

> solution [to] the problem of how to insert high property values and sumptuary spaces into decaying neighborhoods. [Gehry's] Danziger Studio in Hollywood is the pioneer instance of what has

Left: **Venturi and Rauch, Guild House, 1963, Philadelphia.** Shown after Venturi, Scott Brown and Associates' 2009 rehabilitation.

Below: **Eric Owen Moss Architects, Samitaur Tower, 2010, Culver City, CA.** Photo: Tom Bonner.



Left: **Morphosis Architects, *Sixth Street Residence*, 1992, Santa Monica, CA.** Drawing.

Right: **Morphosis Architects, Sixth Street Residence, 1992, Santa Monica, CA.** Interior. Photo: Kim Zwarts.

become an entire species of Los Angeles "stealth houses," dissimulating their luxurious qualities with proletarian or gangster facades. The street frontage of the Danziger—on Melrose in the bad old days before its current gourmet-gulch renaissance—was simply a massive gray wall, treated with a rough finish to ensure that it would collect dust from passing traffic and weather into a simulacrum of nearby porn studios and garages.[7]

In this reading, Gehry's work essentially extends Venturi's decorated shed into a form of fraudulent urban revanche.

This expansion of Venturi's postmodernism gave the project a certain prescience, and Davis saw the Danziger Studio as initiating the predominant trend of '80s and '90s LA architecture, in which postindustrial gentrification was, ironically, performed by buildings that adopted an even more intense industrial vocabulary. This development was propagated by a group of architects that includes the all-male roster of Gehry, Mayne, Rotondi, Moss, Frederick Fisher, Coy Howard, Peter de Bretteville, Robert Mangurian, and Craig Hodgetts.[8] Their work from this time is ambiguously positioned in relation to the subnatural: It can be seen as an exploitative assimilation, the object of Davis's critique, but it can also be interpreted as an embrace of a gritty realism that, per Banham, attempts to address the aftereffects of industrial LA.

As Thom Mayne's or Eric Owen Moss's buildings incorporated industrial spaces and artifacts, they also transformed our understanding of postwar industry into something considerably more unstable and menacing.

The Sixth Street Residence—developed by Mayne's firm Morphosis during this period, from 1984 to 1992—evinces precisely such a tension between co-optation and realism. Like the Danziger Studio, this building was to have a low-maintenance skin (here, cement panels). But it entailed a more direct incorporation of the artifacts of LA's crumbling industrial infrastructure. As Mayne wrote of the project, in an essay he titled "Detritus and Flotsam": "I'm at home in the maelstrom, in a world in a state of perpetual disintegration and renewal. . . . The house explores the ground between these ten found objects and building. The pieces (parts of discarded machinery or dead tech) impart decay, tension, risk, balance—a world between utopia and atopia."[9] Mayne's house reconfigures the post-Fordist vogue for reclaiming the interiors of formerly industrial spaces for lofts and museums alike, offering new construction as an archive for the rusted objects of the industrial city, now repurposed as stairs, skylights, and—most surprisingly—a centrally located shower. And in this sense, the project is still connected to the aesthetics of Brutalism: Alison and Peter Smithson had displayed a similar penchant for detritus and rubble in their 1956 *Patio and Pavilion* installation in London. There, a variety of orphaned objects from the bombing of East London were scattered around a primitive dwelling. Like the Sixth Street Residence, this earlier project integrated these objects into an architecture that engaged, rather than ignored, the changes and discomfiting consequences of urban transformation.

Working for Morphosis on the Sixth Street Residence, architect Andrew Zago collaborated in developing drawings of the structure that brought the aesthetics of urban detritus more firmly into new approaches to architectural representation.[10] Zago's drawings invent an original grammar in which elevation and axonometric views are layered, the sky is dulled out in a postnatural gray that serves as both background and foreground, and the house's rusted and oxidized industrial relics (rendered in metallic foils) take the place of a renderer's shade and shadow. Zago's characterizations of industrial archaeology are far from contemporary architects' attempts to negotiate the wastelands of industry, particularly the aesthetics of so-called green architecture. In the latter, the harmful elements of industry are transformed either by being surrounded by trees, flowers, and wildlife or through a more scientific image of nature as an all-powerful and positive agent of industrial remediation. Green responses to formerly industrial sites and objects are often predicated on an assumption that industrial architecture can somehow be assimilated into a romantic vision of nature. Conversely, Zago's subnatural drawings admit that nature itself no longer exists in a pastoral state in a place like LA.

Mayne's appropriations of decaying industry were echoed by other LA-based practices, particularly that of Moss, the "Jeweler of Junk." Moss specifically designed buildings in postindustrial sites, as for example in his ongoing redevelopment of Culver City, an area that was once the headquarters of Hughes Aircraft, among other industrial concerns, and which now plays host to numerous offices, galleries, and commercial spaces. His buildings there such as the Gary Group (1990) or Samitaur complex (begun in 1996) incorporate rusted metal fittings and stucco finishes that approximate the stains of smog and grit.

Ant Farm, *Gas Station*, 1970. Performance view, University of Southern California classroom, Los Angeles, June 1970. Joe Hall. Photo: Chip Lord.

H. L. Gogerty, Hughes Aircraft Company, Administrative Building, 1950, Los Angeles. Interior. Photo: David G. De Vries/ Library of Congress.

In François Roche's proposed Bangkok gallery, impurities are not so much cleaned as drawn in and collected around architecture, forcing the visitor to consider the relationship between the gallery and the polluted city surrounding it.

Adjaye Associates, Dirty House, 2002, London. Photo: Lyndon Douglas.

WHETHER INTERPRETED as cynicism or postindustrial realism, both Mayne's and Moss's projects from the '80s and '90s fundamentally altered the meaning of industry's spaces and objects. As noted by historian Ben Campkin, twentieth-century industrial space was essentially conceived, much like modern architecture in general, as hygienic and clean.[11] This is particularly true in the aerospace and film production industries of LA, which were closely intertwined with, even supported by, the project of architectural modernism itself. Photographs of such spaces from the '40s through the '70s emphasize their cleanliness and sense of order—for example, Pelli's paradigmatic Teledyne Labs building in Northridge (designed with Lumsden). But as projects such as the Sixth Street Residence and Moss's buildings for Culver City incorporated industrial spaces and artifacts, they also transformed our understanding of postwar industry into something considerably more unstable and menacing.

And yet despite this aesthetic shift, the attitude toward subnature within Mayne's and Moss's work remained unclear. During the Vietnam era, the radical California architectural practice Ant Farm attacked the ecological impact of American militarization and industry. Ant Farm brought people into frightening contact with industrial smog, simulated exposures to pollutants, and, in a famous act of protest, literally buried American automobiles in the US desert. By the '90s, Mayne and Moss were dealing more with the remains of industry than with its active objects. And their work forced inhabitants into a confrontation with industrialization through the experience of its manufacturing detritus and decay. But they sublimated the potential power of such experiences within both a larger iconography of economic revival (as addressed by Davis) and an ultimately romantic conception of history: Industry became both fearful and archaeological, like the aestheticized sublime of ruins. By beautifying and even exploiting the grittiness they ostensibly condemned, Mayne and his colleagues never resolved the underlying contradiction of romanticizing subnatural materials, and their work did not coalesce into a coherent architectural response to the socioeconomic forces that so clearly concerned them.

Although these architects seem to have understood the paradoxes of their aesthetic, largely leaving it behind in their more recent work, several contemporary practices have made a marked return to the imagery and ideas of LA's subnatural architecture, often reprising its powerful ability to visualize urban wreckage while remaining aware of the contradictions of doing so. In 2012, architect Peter Zellner realized his design for the Matthew Marks Gallery in Hollywood—a project Zellner described as indebted to both Gehry's Danziger Studio and the early work of Venturi.[12] In London, David Adjaye similarly claimed that his Dirty House, a 2002 artist's studio and residence in a converted building in the formerly industrial Bethnal Green neighborhood, drew from Gehry's early projects. Both are curious resurrections: The Matthew Marks space is a monumental stucco-clad monolith with an elongated door as its only opening onto the street, painted a striking white and boasting an equally striking industrial entablature—an aluminum sculpture by Ellsworth Kelly. While Zellner sees this design as a continuation of the Danziger Studio's form and grittiness, the project's startling white color is a significant departure from the earlier work's active engagement with its environmental context. And while Adjaye's Dirty House's dark, textured walls might look filthy to some, they are in fact covered with black antigraffiti paint. Both projects are actually white cubes, in that they extend the project of an earlier modernism, a strategy of environmental resistance, by setting interiors apart from their surroundings.[13]

This dialectic of clean cultural programs set within tough outer shells opposed to their surroundings was critically targeted by the Paris-based architect François Roche, principal of the firm New-Territories/R&Sie(n) (who recently taught at the University of Southern California's School of Architecture). His proposed Dustyrelief/B_mu gallery project in Bangkok offers an engagement with pollution that also owes much to earlier LA architecture, even as it departs from it. The building is a series of stacked boxes surrounded by an electrified skin that attracts the solid particulates within atmospheric contamination, thus bringing the city's degraded atmosphere into a visual confrontation with interior gallery spaces isolated from it. The building still provides a protected space, but it also objectifies smog, pulling it from the sky to hover in contest with the environment for viewing art. Impurities are not so much cleaned as drawn in and collected around architecture, as with the Danziger Studio, but in a more resolutely forceful and active fashion that compels the visitor to consider the relationship between the gallery and the polluted city surrounding it.

LOOKING TO THE FUTURE of LA's subnatural architecture also requires reflecting on its past, and we might conclude by looking at practices that query subnature's increasingly historical status within our cities. As efforts to clean the air, water, and landscapes of LA continue, contemporary forms of subnature potentially become lost—forgotten elements of the built landscape. How do we historicize and preserve remnants and artifacts of LA's subnatural architecture, as is crucial to maintain our urban history in full and to avoid whitewashing the ecological transformations that have created the urban environments we currently inhabit? Recently, San Francisco–based artist Amy Balkin engaged with the city's history of pollution through the bureaucratic and archival processes of historical preservation in her *Public Smog* project, 2004–. She proposed to have the atmosphere declared a UNESCO World Heritage site, not to safeguard it per se, but so that preservationists would demand that it be cleaned, as purification is often an assumed precondition of preservation. Another set of thinkers have also turned to preservation strategies but have asked a different question: How can the actual pollution in the air be preserved as a record of the political struggles over LA's environment (and those of other cities)? Writers and architects such as Marcos Sánchez and Mark Wasiuta, Javier Arbona, John Knechtel, and Jorge Otero-Pailos have attempted, with renewed urgency, to integrate urban ecology into architectural and spatial history.[14] These authors consider the material and phenomenological questions raised by attempts to conserve and experience pollution from the past, as in projects such as Sánchez, Wasiuta, and Adam Bandler's *Instructions for the Reconstitution of Historical Smog*, 2012, which proposes to reconstruct the experience of smog within LA's built landscape. Such projects raise awareness of the subnatural as a significant part of the city's past, but they do not yet engage pressing critical and political concerns regarding the future of contentious sites. To maintain a building or landscape in a contaminated state, thus reconstituting pollution or preserving it for the sake of affective impact is, unsurprisingly, to enter a minefield of ethical dilemmas.

And yet these questions must be addressed if we are to negotiate effectively the complex interchanges between the built and natural environment as our cities continue to develop. Perhaps subnatural architecture could eventually function very differently from either a green architecture (with its emphasis on complete remediation) or the recent vanguard approaches of Roche, Sánchez and Wasiuta, and Otero-Pailos, which attempt to reawaken subnature and press us into a direct engagement with it. Such an architecture might avoid replicating the space apart created by modernism but also break free from the romanticism that undermined previous attempts to engage subnature, instead transforming what is considered pollution into history: something once immanent, now objectified, yet inseparable from our current and future urban experience. □

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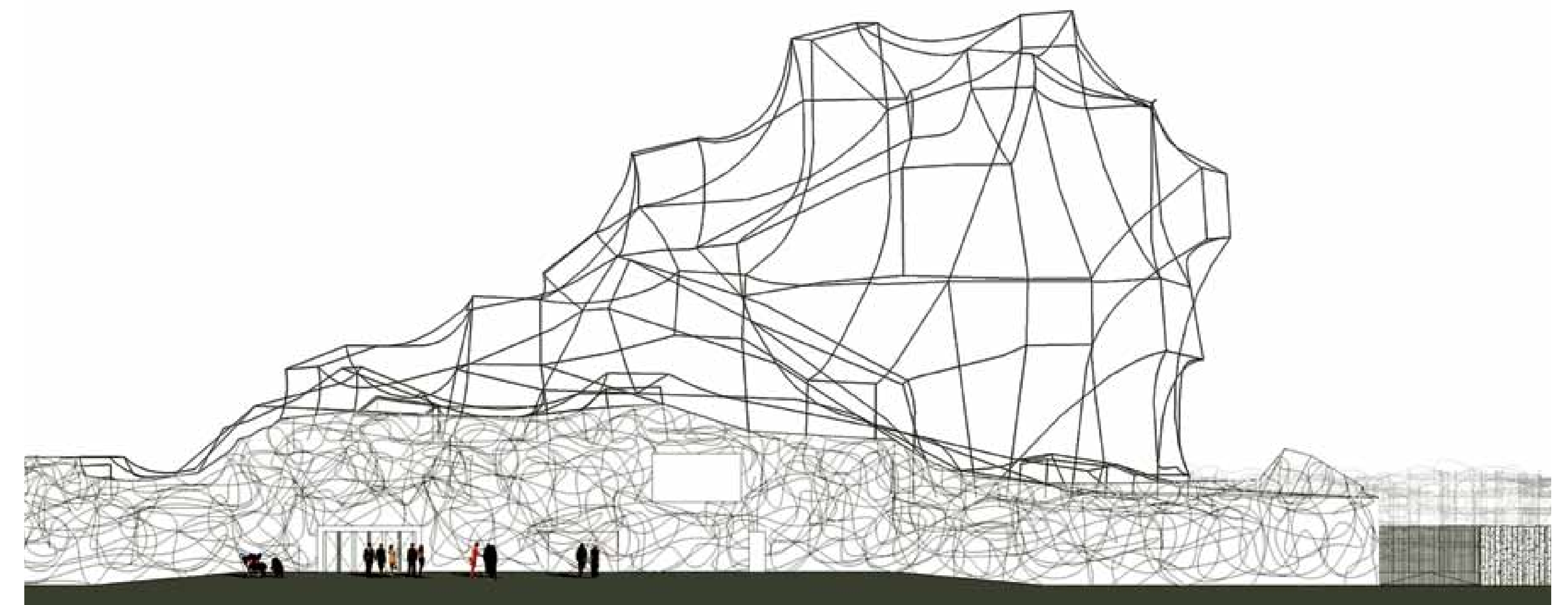
For notes, see page 384.

Above: **New-Territories/R&Sie(n), *Dustyrelief /B_mu*, 2002, Bangkok.** Material study.



Below: **New-Territories/R&Sie(n), *Dustyrelief /B_mu*, 2002, Bangkok.** Elevation study.

NOTES

1. See David Gissen, *Subnature: Architecture's Other Environments* (New York: Princeton Architectural Press, 2009). The following essay draws on many ideas from the book but situates them within a specific geographical and historical context.

2. Mike Davis, *City of Quartz: Excavating the Future in Los Angeles* (New York: Vintage, 1992), 238; Jeffrey Kipnis, *Perfect Acts of Architecture* (New York: Museum of Modern Art, 2001), 154; John Chase, *Glitter Stucco and Dumpster Diving: Reflections on Building Production in the Vernacular City* (New York: Verso, 2000), 173–90; David Fletcher, "Los Angeles River Watershed: Flood Control Freakology," in *The Infrastructural City: Networked Ecologies in Los Angeles*, ed. Kazys Varnelis (Barcelona/New York: Actar, 2008), 34–51; Stephen Phillips, "Architecture Industry: The L.A. Ten," in *Overdrive: L.A. Constructs the Future, 1940–1990,* eds. Wim de Wit and Christopher James Alexander (Los Angeles: Getty Research Institute, 2013), 185–200. See also the forthcoming exhibition "Everything Loose Will Land," curated by Sylvia Lavin at the MAK Center, Los Angeles.

3. The above synopsis is from Gene Densfor and Roger Keil, *Nature and the City: Making Environmental Policy in Toronto and Los Angeles* (Tucson: University of Arizona Press, 2004) and Chip Jacobs and William Kelly, *Smogtown: The Lung-Burning History of Pollution in Los Angeles* (New York: Overlook, 2008).

4. Frank O. Gehry and Rosemarie H. Bletter, *The Architecture of Frank Gehry* (New York: Rizzoli International, 1986), 185. Lou Danziger in discussion with the author, March–April 2013.

5. Robert Venturi, Denise Scott Brown, and Steven Izenour, *Learning from Las Vegas: The Forgotten Symbolism of Architectural Form* (Cambridge, MA: MIT Press, 1977), 91.

6. Reyner Banham, *Los Angeles: The Architecture of Four Ecologies* (Berkeley: University of California Press, 2001), 179–80.

7. Davis, *City of Quartz*, 238.

8. Phillips, "Architecture Industry."

9. Thom Mayne and George Wagner, *Thom Mayne, Sixth Street Residence* (Cambridge, MA: Harvard University Graduate School of Design, 1989), 50.

10. Kipnis, *Perfect Acts of Architecture*, 154.

11. Ben Campkin, "Ornament from Grime: David Adjaye's Dirty House, the Architectural 'Aesthetic of Recycling' and the Gritty Brits," *Journal of Architecture London* 12, no. 4 (2007): 367–92.

12. Christopher Hawthorne, "Matthew Marks Gallery design blurs line between art, architecture," *Los Angeles Times*, January 29, 2012, accessed April 2013, http://articles.latimes.com/2012/jan/29/entertainment/la-ca-matthewmarks-20120129.

13. This latter insight is from Teresa Stoppani in response to Campkin's paper delivered at the Society of Architectural Historians conference in Pittsburgh, 2007.

14. See Jorge Otero-Pailos, "Conservation Cleaning/Cleaning Conservation," *Future Anterior* IV, no. 1 (2007): iii–viii; Javier Arbona, "Dangers in the Air: Aerosol Architecture and its Invisible Landscapes" in *Air*, ed. John Knechtel (Cambridge, MA: MIT Press, 2010), 80–97.