

THE ARCHITECTURAL RECONSTRUCTION OF NATURE

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I.

Buildings approaching the forms of mountains and caverns; structures that appear as rivers and clouds: the contemporary architects producing these conditions advance an agenda that we can provisionally term the “architectural reconstruction of nature.” In addition to representing relationships to nature, the processes or shapes of nature, this architecture also appears to bring nature *back* into the view and experience of the city. This represents both an architectural construction and *re*-construction of nature because architects impart a novel return of the urban environment to a partially pre-modern and pre-industrial state: Images and experiences of nature appear where they should not appear anymore.

By understanding contemporary work as part of an architectural reconstruction of nature, we forge connections between architecture’s history and the heart of contemporary socio-natural debates. Within the history of architecture, the work of the architect often appeared as an act of reconstruction, and very often this reconstruction effort involved reproducing the features and elements of nature itself. From the eighteenth century to the early twentieth, numerous architects understood architecture as a discipline that both literally and analogically reproduced natural form. But contemporary architectural reconstructions of nature also relate to a peculiar contemporary moment in which “reconstruction” is the *modus operandi* for politicized forms of environmentalism. Throughout many cities we see efforts to reconstruct the urban atmosphere and ground to its pre-industrial cycles. These new insertions of topography and verdure and corrections to the atmosphere are situated against the existing spaces of the modern and contemporary city.

As an interpretative lens for considering the role of nature in architecture, the architectural reconstruction of nature idea also presents complex challenges to contemporary architectural theory. A “reconstructive” reading of nature-architecture complicates the claim that contemporary ecological, bio-mimetic, and geo-mimetic work operates in a post-representational regime. Eco-scientific emphases on systems and metabolisms, and materialist philosophies of immanence and flow, challenge the idea of architecture as a historically constituted system of representation. These theoretical frameworks demand an embrace of a natural present against the concepts of representation and history. Opposing these theories, the very term “reconstruction”



ARTIFICIAL MOUNTAINS AND CAVERNS IN THE CHINESE MANNER, JOHANN BERNHARD FISCHER VON ERLACH, 1721.

offers an interpretation of nature in architecture that de-emphasizes physical interrelations and focuses instead on imagery and historical characteristics. By connecting contemporary work to the idea of reconstruction, we provide a firmly architectural setting for future explorations of nature in architecture.

II.

From fifteenth-century drawings of ancient Mediterranean temples to more contemporary drawings of early twentieth-century skyscrapers, reconstructions have always played a role in the representational and theoretical features of architecture. The concept of “reconstruction” within architecture generally refers to a process by which architects visually represent the buildings of the past. The term may also refer to the literal act of rebuilding, but it almost always carries a connotation of historical recovery and investigation. Most architectural reconstructions entail drawn restorations and restitutions of ancient buildings in ruinous states or lost to time. In the eighteenth and early nineteenth century, reconstructions took on a more vital position in what architectural historians call the “archaeological” architecture of early modernity. European architects studied surviving descriptions and remnants of ancient buildings in an attempt to wrestle with the authority of antiquity. Reconstructions of the structures of ancient Athens and Rome elaborated a historicist theory of architecture, where the languages, or “styles,” of past epochs and civilizations represented architectural theoretical principles.

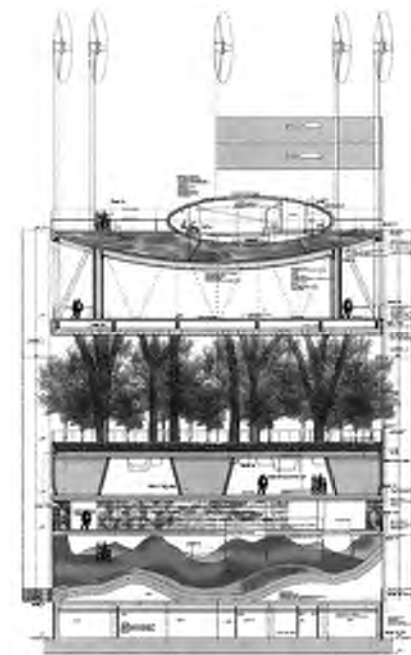
Little known among architecture’s reconstructive project are reconstructions of nature; projects that also entailed aspects of historical recovery and visualization. Within one of the most central and early works on architectural history and reconstruction—Johann Bernhard Fischer von Erlach’s *Entwurf Einer Historischen Architectur* (Plan of Civil and Historical Architecture) of 1737—the architect presented reconstructions of ancient landscapes, the gardens of Babylon, mythical water-courses, and lost caverns. In one illustration from this book,

Fischer von Erlach reconstructed a reconstruction of nature—an artificial mountain and cavern he imagines from ancient China. Fischer von Erlach situates the reconstruction of nature as an aspect of both the history of architecture and the practice of historicism in architecture. His drawings construct the languages of the architectural past and past natural languages. Containing rough edges, craggy outcroppings, and a generally un-worked and unfinished impression, the nature of past civilizations becomes a nature raw and jagged. Fischer von Erlach's architectural reconstructions would influence the practice of architecture for almost one hundred years. The reconstructions of nature within this book would impact late-eighteenth- and early nineteenth-century French and British garden and park architecture. Within these latter works, architects built hybrid natural and architectural forms such as rough hewn grottos and other representational landforms with geographically and historically narrative features.

The architectural reconstruction of nature became a side note as architecture's mimetic project collapsed in the face of late-19th and early 20th century theories of spatial subjectivity and construction. Perhaps we can identify more elusive reconstructions of nature in various expressionist images—drawings of "buildings like mountains" that stretch from Bruno Taut to Hugh Ferriss—or in the return of urban consciousness toward nature (found, for example, in the drawings of Le Corbusier's Radiant City). Nevertheless, the representational and historical aspects of reconstructing nature were alien to a modernist program that advanced art as a supplement to nature. Any returns to fanciful and historicist architectural images of nature may be found within the architectural historical recoveries that marked post- and late-modernisms. Reconstructed ancient landscapes, grottos, and other historicist natures appeared at new modern scales, but these projects lacked widespread influence within socio-natural discussions of architecture. Their literal imagery seemed disconnected from problems of architectural representation.

More novel theories and techniques of the architectural reconstruction of nature investigated the very constructability of nature in a "post-natural" era. These latter efforts include explorations of metropolitan "resurrected" and "synthetic" nature and more formal exploration of architectural "excavation." Rem Koolhaas's reconstruction of the Downtown Athletic Club of 1977 emphasized incongruous and artificial forms of programmed nature—riding rings, pools, and meadows—"layered" within the tall building. Peter Eisenman's investigation of "ground," which stretched from the late 1970s to the early 1980s, investigated the provisional, contingent, and built aspect of the urban terrestrial surface.

The above projects lie outside contemporary architecture-and-nature debates, yet from this work it is a mere hop, skip, and a jump to subsequent projects more obviously reconstructive of nature that would be embraced within the contemporary architectural nature discussion. Current architectural efforts



DUTCH PAVILION, EXPO 2000,
HANNOVER, MVRDV



MADISON SQUARE PARK
SKYSCRAPER, NEW YORK,
ROGER FERRI, 1976



LANDFORM, FRESH KILLS PARK, STATEN ISLAND, DESIGN COMPETITION ENTRY, JAMES CORNER FIELD OPERATIONS, WITH STAN ALLEN ARCHITECT, 2001



DIGITAL RECONSTRUCTION OF MANHATTAN IN 1609, THE MANNAHATTA PROJECT, WILDLIFE CONSERVATION SOCIETY, 2009

to resurrect and rebuild lost nature with architecture ironically extend the concepts of artificial excavation. More directly, the contemporary concept of “stacked” landscapes, which entail literal recreations of existing, endangered, or lost forms of nature, are more obvious extensions of earlier investigations of the metropolitan resurrection of nature.

III.

Today, the architectural reconstruction of nature continues and intersects with themes of reconstruction from within late-modern environmentalism, but this intersection is not at all obvious. For example, contemporary environmentalist calls to rebuild the urban ground entail reconstructing nature, but without any overt historical sense or aesthetics. The literal reworking of “brown” urban sites into non-polluted and literally green forms returns the ground to a form *sans* industry—to a form before the destructive effects of industrial urbanization. Very often these re-workings of the ground entail the planting of vegetation connected to the ancient natural history of the site. In U.S. and English environmentalism, the word “native” is used to describe plant species that belong to the site but that also can be traced to the pre-Columbian era. A historical mentality, however idealistic and hidden, is at work here. This returning of the pre-industrial ground often entails more than transforming the actual nature



CALIFORNIA ACADEMY OF SCIENCE, SAN FRANCISCO, RENZO PIANO BUILDING WORKSHOP, 2008

on the ground. It also incorporates powerful proposals to rebuild ground into seemingly pre-industrial and symbolic architectural forms. Examples of this include shaping urban trash heaps into monumental topographic shapes covered with plantings (for example, Nanjido Trash Island in Seoul, South Korea, from 1978-1993; and Fresh Kills Landfill in Staten Island, New York, of 2005). The temporal and representational aspects of these projects are intertwined. They appear as late-modern ziggurats made of trash, covered with flowers. Visitors happen upon these spaces like urban explorers, discovering ruins of their own collective making.

Less material, but equally powerful and ultimately related to the above efforts, are the digital image reconstructions of the pre-modern topography and nature of various cities. Such images have been made before, but by emphasizing the digital production of these processes they appear outside individual artistic authorship; they appear as reality itself. Nonetheless, these images also incorporate significant concepts regarding urban representation and environmentalist politics. The digital reconstruction of the topography and nature of Manhattan, London, Paris, Seoul, and Tokyo in pre-urban forms is just another expression of contemporary anxiety over the ultimate impact of urbanization over nature. In these images topography and vegetation dominate the city and are visualized to make something akin to a skyline, but of earth. In this context, the reconstruction of nature by naturalists has a relationship to architectural forms of representing the city.

As anti-urban as these images may be, the authors of these images generate them to be consumed and pondered by the inhabitants of these very same cities. The Western romance with “nature” was born in the industrial cities of the West, and these images provide the most literal illustration of this idea. In many ways, these images of pre-modern urban nature offer a natural historical barometer with which to measure future forms of urbanization, because our cities look nothing like these images. Stripped of trees and topography, these images inversely imply that every



MAP OF ATMOSPHERIC CONTENT ENTERING PARIS IN THE 19TH CENTURY, PHILIPPE RAHM, 2008

garden we imagine in our city's future, every future tree planted in its streets, every addition of topography, marks an engagement or partial reconstruction of the city's now-irrecoverable earlier form. Within this context, we might consider contemporary architectural insertions of nature in cities as natural historical "returns" without the image of either historicism or pure nature. When standing on the topographically-structured spaces of a contemporary landform project, one simultaneously experiences the architectural future and this socio-natural past.

The reconstruction of nature stretches into areas that lie at the edge of natural and architectural representation. For example, when contemporary environmentalists urge us to reduce greenhouse gas emissions to their levels of twenty years ago, they effectively ask us to participate in a project of reconstruction. We are asked to return the chemical composition of the atmosphere to its condition in the mid-1980s. The contemporary rebuilding of our atmosphere, of the sky, hangs over virtually all discussions of cities, environment, and nature. The Kyoto Protocols and related efforts paint the Earth's atmosphere of the mid-1980s as an imaginary Eden—like a vaporous hanging garden of Babylon. If we return to this atmosphere, it may provide salvation from a dim ecological future. Recent architectural projects informed by this environmentalist mentality include efforts to reconstruct the air of specific geographical places and reintroduce now-absent odors carried into cities from their surrounding countryside. These projects similarly serve as a rebuilding of the city into some earlier form.

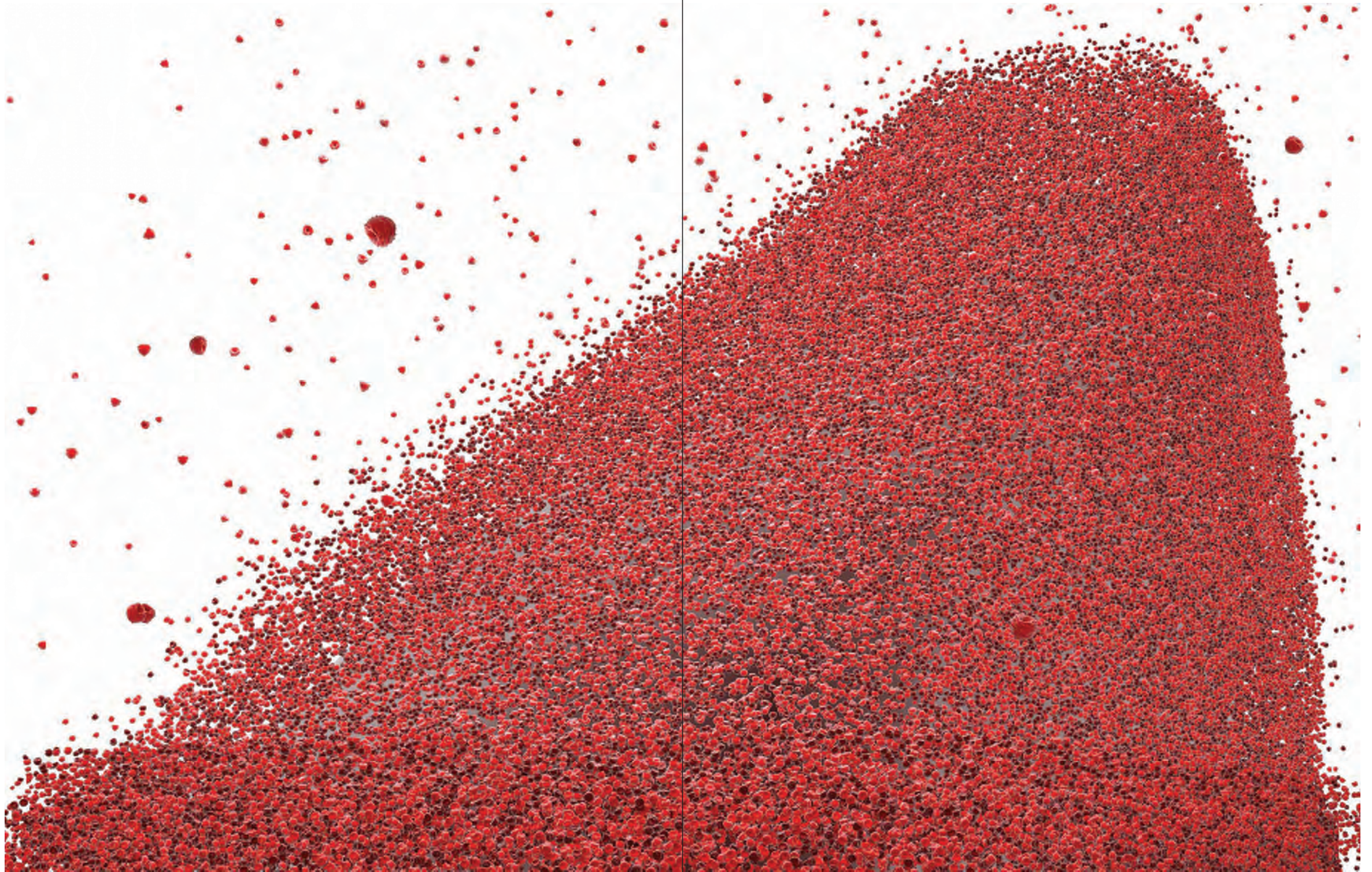
Ultimately, environmentalist and architectural reconstructions can be brought together more forcefully and self-consciously. Not only are contemporary architects engaged with nature oddly subservient to environmental science, it is doubtful that many contemporary architects consider their nature imagery to be reconstructive or even representational in the least. Because the reconstruction of nature is an aspect of the history of architecture, architecture can be positioned to build nature into forms that engage with problems of history and representation from an architectural perspective. Within the architectural reconstruction of nature, architectural mountains might be made from lattice-works of flowerpots, potted with flowers produced by the botanists that once worked in the city. Architecture becomes a site for the endless reconstructions of nature, but these reconstructions lack the naturalistic historicism of their eighteenth

century or more recent antecedents. Through architecture, nature appears as a production of the city—nature's contemporary reality—but also as an act of recovery.

IV.

Within 21st century architectural theory, the insertion of topography and natural material into buildings and cities suggests a new closure between architecture, ecology, and material science. Architects imagine buildings and cities working within the processes and frameworks that constitute nature itself. But the architectural reconstitution of topography and nature also represents forms of reconstruction and history. Through this lens, we understand "nature" as something that was (past tense) in the city. By bringing it back, we reconstruct the former reality of the city but also acknowledge the end of nature as we understand it. What could be more modern than demonstrating the manipulation of time and nature in one project?

Ultimately, the architectural reconstruction of nature is not a call for the complete visual transformation of a city into mimetic natural form. It is not intended as a naturalistic architectural project that masks a building in the rhythms of a distant natural time. It is not part of a vitalistic project that measures nature in flows and immanence. "Reconstruction" and "history" imply socialized relationships to nature versus neo-naturalism. The architectural reconstruction of nature offers a self-conscious insertion of architectural and urban history into architectural representations of nature. If bringing nature into cities is now a form of reconstruction, architecture should be positioned to give this operation a form—a form belonging to the history of architecture.



MAGIC MOUNTAIN, AMES, CER09 (AMID) ARCHITECTS, 2002. PROPOSAL FOR A "MOUNTAIN" OF CULTIVATED ROSE BUSHES COVERING AN URBAN POWER PLANT IN IOWA