

difference

thresholds

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35



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Ben Aranda, with Chris Lasch, established the New York-based architectural studio Aranda/Lasch in 2003. Recent winners of the Young Architects Award in New York, their work is also the subject of the book *Tooling*, published by Princeton Architectural Press in 2006. *The Morning Line*, in collaboration with the artist Matthew Ritchie and others, was recently installed at the 3rd Bienal Internacional de Arte Contemporáneo de Sevilla and was also represented at the 2008 architectural biennial in Venice.

Non Arkaraprasertkul is Harvard-Yenching Doctoral Fellow in Chinese Studies at the Oriental and Chinese Institutes at the Harris Manchester College at the University of Oxford (UK) and Visiting Lecturer in Architecture and Urban Design at MIT, where he was trained in the History, Theory, and Criticism of Architecture (HTC), and Urban Design.

Anne-Marie Armstrong is originally from Toronto and currently a Master of Architecture candidate at Yale University. This essay represents a portion of research completed with the support of a Fulbright scholarship.

Elizabeth Bishop is trained as an architect. A recent graduate of the MED program at Yale, she currently lives and works in London.

Cody Davis studied architecture at the Ohio State University and is a student at Yale University's School of Architecture. He was recently an intern at Gage/Clemenceau Architects in New York City.

Lara Davis is currently an M.Arch candidate at MIT, where her work has focused on intersections of biological and architectural morphology. She received a BFA in installation art and critical theory from Alfred University, School of Art & Design and established the interdisciplinary firm Limaçon Design.

Sarah Dunbar recently completed her M.Arch degree at MIT's School of Architecture and Planning. Her thesis research in the Tibet Autonomous Region was funded by a Schlossman Research Grant.

James D. Graham recently earned his M.Arch degree from MIT. He received his undergraduate education in architecture from the University of Virginia and an MA in media studies from the New School.

Elijah Huger is an architect and educator whose work explores the interactions between landscape, regulatory systems, and architecture. The director of design firm Periphery, his projects include award-winning competition entries for the New York High Line, the Bourne Bridge|Park, and the Tangshan Earthquake Memorial Park. He is currently Assistant Professor of Art at Wesleyan University where he leads North Studio and the architecture studio track in the Department of Art & Art History.

IJK studio is the office co-founded by Mariana Ibanez and Simon Kim. Interested in a destabilized practice of design, where dynamic networks replace the single authority, IJK studio was established in 2005 in London, England. The principals met at the Architectural Association where they both received thesis honors. After working for Zaha Hadid, IJK studio re-located to Cambridge, Massachusetts. Mariana Ibanez is Assistant Professor of Architecture at the GSD and Simon Kim is a Lecturer at the Massachusetts Institute of Technology and a Research Associate at MIT's Design Lab. Recent designs include a house in Inner Mongolia, a light field at Harvard's Graduate School of Design, and an operable clothing/cladding system for the Museum of Science in Boston and a digital navigation device.

Mark Jarzombek is a Professor of the History and Theory of Architecture at MIT and is also the Associate Dean of the School of Architecture and Planning. He has taught at MIT since 1995, and has worked on a range of historical topics from the Renaissance to the modern; his most recent book was entitled *Global History of Architecture*, co-authored with Vikram Prakash and Frances Ching.

Caroline Jones studies modern and contemporary art, with a particular focus on its technological modes of production, distribution, and reception. Professor of Art History and director of the History, Theory, and Criticism Program in the Department of Architecture at MIT, she has also worked as an essayist and curator. A frequent contributor to Artforum, Jones' current research into globalism informs her next book on contemporary art, the world picture, and what she calls "biennial culture".

Melissa Lo is a PhD candidate in the History of Science at Harvard University. She received her SMArchS in the History and Theory of Architecture from MIT in 2008, where her thesis examined Jean-Marc Bourguery's anatomical atlas, *Traité complet de l'anatomie de l'homme* (1831-1854).

Alexander Maymind studied architecture at the Ohio State University and is a student at Yale University's School of Architecture. He was recently an intern at Eisenman Architects in New York City.

John McMorrough is an assistant professor at the Ohio State University (where he is also chair of graduate studies in architecture) and an architect / researcher (in practice with studioAPT: Architecture Practice Theory). His work addresses the possibilities for architecture and urbanism amidst changes in economic, environmental, and political circumstance. This work includes treatments on the subjects of pedestrian malls, supergraphics, and post-modernism as well as studies of current practices and their relation to issues of program, parametrics, and other types of design information.

Meredith Miller received her MArch from Princeton University in 2006. She has worked as a project architect with Höweler + Yoon Architecture in Cambridge MA.

Nikki Moore is a graduate of MIT's SMArchS program, and is currently working on a PhD dissertation on subjectivity for the European Graduate School and living in New York.

Desiree Palmen was born in the Netherlands in 1963, and went on to study art at the Academie of Arts and at the post-graduate Jan van Eyck Academie in Maastricht, specializing in sculpture. She maintains a special interest in biology and explores human mimicry in urban environments using garments painted to resemble their background. She lives and works in Rotterdam and Berlin.

Nicola Pezolet is a PhD student in the History, Theory and Criticism of Art and Architecture program at MIT and is a Social Sciences and Humanities Research Council of Canada fellow. His current research investigates the material practices and ideological positions of several movements in modern art and explores critical debates surrounding the concepts of modernism and the avant-garde as they apply to postwar architecture and historiography.

Reilly Rabitaille recently earned his Master of Architecture degree from MIT, where he was the recipient of the American Institute of Architect's Henry Adams Medal, and holds a Bachelor of Design degree in architecture from the University of Florida, where he graduated Summa Cum Laude. He is currently working as an architectural designer with a successful firm in New York City.

Scott Ruff is currently an Assistant Professor of Architecture at Syracuse University. He received his B.Arch and M.Arch II from Cornell University. He has taught at Cornell University, Hampton University, and SUNY Buffalo. His area of research is African-American aesthetics.

Fei Wang is currently teaching at the University of Michigan and has taught at North Carolina State University. He has received a B.Arch (Tongji), an M.Arch (Virginia Tech, WAAC), and a second M.Arch in History and Theory (McGill). He has practiced architecture in Shanghai, Alexandria, and Princeton and his design and research projects have been exhibited in China, Germany, the United States, and Canada.

J. Meejin Yoon is an Associate Professor in the Department of Architecture at MIT and founder of MY Studio (2000) and Höweler + Yoon Architecture (2005). She is the recipient of the Architectural League of New York's Emerging Voices (2007), the Rome Prize Fellowship in Design (2005), the Young Architects Award (2002), and a Fulbright Fellowship in 1997.

Differentiating “Difference”

James D. Graham

6 *Man is a differentiating creature. His mind is stimulated by the difference between a momentary impression and the one which preceded it. Lasting impressions, impressions which differ only slightly from one another, impressions which take a regular and habitual course and show regular and habitual contrasts—all these use up, so to speak, less consciousness than does the rapid crowding of changing images, the sharp discontinuity in the grasp of a single glance, and the unexpectedness of onrushing impressions.*

Georg Simmel, “The Metropolis and Mental Life”

Figure from ground, specific from generic, individual from collective, local from global: it is through the act of distinction that we ascribe and understand the relative identities of things, spaces, ideas, people. The critical ambivalence of “difference” is that it requires first a sameness to be measured against; it vacillates constantly between affinity and dissimilarity (the ones and zeroes of apprehension). As Gilles Deleuze puts it in the preface to his canonical text on the subject, difference “allows itself to lead to contradiction, only to the extent that its subordination to the identical is maintained.”

But what constitutes a meaningful or productive difference? How can simple relativism and reductive categorization be usefully re-configured? The contributors to *thresholds* 35 present sixteen distinct but interrelated studies that probe these and other questions while situating difference within particular cultural, historical, spatial, and theoretical contexts.

One of difference’s more problematic corollaries, “originality”, is at the heart of **Non Arkaraprasertkul** and **Reilly Paul Rabitaille**’s study of Ongard Satrabhandhu’s Building Nine at Panabhandhu School, which adapted (or, depending on one’s perspective, plagiarized) the forms and features of Modernist masterworks to suit the climate and political milieu of Bangkok. A similar brand of referential difference is explored in **Fei Wang**’s essay on the Zhangjiang Hi-Tech Park in Shanghai. A heterological blend of Chinese tradition with Western proper names and imagery, Zhangjiang (like the Panabhandhu School) com-

mingles local identity with international ambition. **Mark Jarzombek**’s “Roadside” photo series, interspersed throughout the journal, offers a witty counter-canon of ersatz masterworks that may as well have been designed by Aldo Rossi, Peter Eisenman, Giuseppe Terragni, Robert Venturi, Kenzo Tange, and Michael Graves.

Things change over time. Contemplating the not-so-distant (if not inevitable) future, **John McMorrough** posits a possible new role for the architectural discipline in the face of impending apocalypse, no longer based in capitalist plenitude but rather the performance-based imperatives of scarcity. **J. Meejin Yoon** and **Meredith Miller** use the painfully protracted construction of Boston’s so-called Big Dig to describe public works as an ongoing condition of material and symbolic transfer, a process whose impacts are registered well outside the scope of the completed infrastructure. The transience of meaning is also explored in **Nicola Pezolet**’s essay on Peter and Alison Smithson’s “Patio and Pavilion” installation of 1956. An architectural shell intended to be transformed by artists, the project undergoes further discursive “alterations” that Pezolet finds in the responses of architectural critics. Such tides of interpretation are likewise essential to **Melissa Lo**’s account of the beleaguered medieval beaver. The shifting scholarly regard for the Castor illustrates not only the zoological practices of the beaver’s observers but also the changing nature of knowledge, marked by a turn from universalist allegory towards the systematic and the particular.

Several essays in *thresholds* 35 center on a concern with techniques of iteration and variability. **Caroline A. Jones**’ interview with **Ben Aranda** of Aranda/Lasch takes the recent *Morning Line* installation (conceived of as a model of the universe) at the 2008 Seville Biennial as its point of departure. The discussion explores issues of randomness, craft, Difference Engines, pavilions, and the role of algorithms in Aranda/Lasch’s work. **Elijah Hugu** examines the humbly ubiquitous “Jersey Barrier,” whose generic unit (originating from a very specific purpose) has been endlessly reconfigured, adorned, and dispersed across the globe, taking on new functions and staking out new visual identities along the way.

The rhetorical act of “signifyin’” is explored by **Scott Ruff**, who traces the ways in which the rhythmic improvisations and entredres of signifyin’ have influenced other more spatial modes of African-American cultural production, particularly Walter Hood’s landscape design. **Mariana Ibanez** and **Simon Kim** of I|K Studio—who were among the architects selected to design a house for the ongoing Ordos 100 project—discuss how their design strategically engages both the specificities of the site’s masterplan and the generalities of the broader field of contemporary architecture.

The discourse of difference is frequently concerned with edges, those delineations where “this” is known not to be “that.” But boundaries are rarely absolute: **Anne-Marie Armstrong** presents the particularly problematic case of the Haskell Free Library, which sits directly astride the Canada / United States border. In that same architecturally-scaled vein, two design projects explore the liminal contact of adjacent but disparate interior programs: **Sarah Dunbar**’s hybrid monastery and gamma ray research institute gathers the metaphysical and the cosmic into a monumental form in a Tibetan valley, while **Alexander Maymind** and **Cody Davis** propose a mixed-use complex whose functions are not compartmentalized but rather juxtaposed in a vivid and unpredictable collage. The collision of commerce, desire, and architectural form that Maymind and Davis investigate in Brooklyn is in many ways predated by the warehouse urbanism of London’s West India Docks, studied by **Elizabeth Bishop**. As a point of transfer between the extra-state apparatus of maritime trade and the land-based merchants who satisfied the developing tastes of the British public, these docks are a subtle system of territorial control, built to absorb and to regulate London’s engagement with the wider world.

Taking the body itself as a boundary, two essays invite the reader to reconsider the intimacy of the self, finding difference within the confines of our own subjectivity. **Lara Davis** outlines a set of “twin logics” based not on indistinguishable symmetry but rather on what she terms “non-autonomous individuality” and the mutual embedding of the other within the subject. The equally layered overlaps and disjunctions between the personal and the authorial “I” come to light in **Nikki Moore**’s poignant and provocative readings of Ariana Reines’ prose poem “Coeur de Lion” and Slavoj Žižek’s *Parallax View*. From the “minimal difference” of the divided self to the lines between countries and cultures, the contributors to *thresholds* 35 situate difference at the locus of our perceptual and conceptual worlds, as a variable and always contingent way of making distinctions.

Differences, Originality and Assimilation: Building Nine at Panabhandhu School

Non Arkaraprasertkul & Reilly Paul Rabitaille

8

An Architect should neither compete in the war of images, nor be concerned with absolute originality.

Ongard Satrabhandhu¹

In 1969, the architect Ongard Satrabhandhu was commissioned by his family to design Building Nine of the prestigious Panabhandhu Elementary School in Bangkok. Thai by birth but educated at both Cornell and Yale, where architectural study emphasized the latest and greatest design *du jour*, Ongard chose instead to directly reference Modernist architects such as Le Corbusier. This emulation, though often criticized by Western academics as a form of plagiarism, not only allowed Modernism's entrance into the Thai tradition but also highlights the differences in the definitions of originality and assimilation when viewed through a specific cultural lens. In the case of Thailand, a country with a long history of cultural intermingling as a result of its frequently shifting borders, Building Nine was enthusiastically received as an emblem of Western high culture in Thailand and its architect as a fearless appropriator of elements and motifs from various sources as a means of paying homage to the purity of Modernist form.²

Architecture of Building Nine: Transplantation and Adaptation

At its core, Ongard's Building Nine is essentially a modified version of Le Corbusier's unbuilt French embassy in Brasilia (1963), treating the original design as a design template or *found object* that could be adjusted or exaggerated to satisfy the needs of the school and dormitory program [figs.2,3]. Given the limited and awkwardly triangular nature of the site, the circular plan of the transplanted Embassy allowed for an aesthetically pleasing site strategy as well as a method for vertical expansion. Ongard re-imagined the L-shaped office spaces of the Embassy plan as a series of classrooms connected together by double-loaded corridors, which, when echoed without partitions, served as dormitory space at the upper levels of the building. The top floors, which Le Corbusier intended for the office of the French Ambassador, were also paralleled in Ongard's transplantation, which desig-

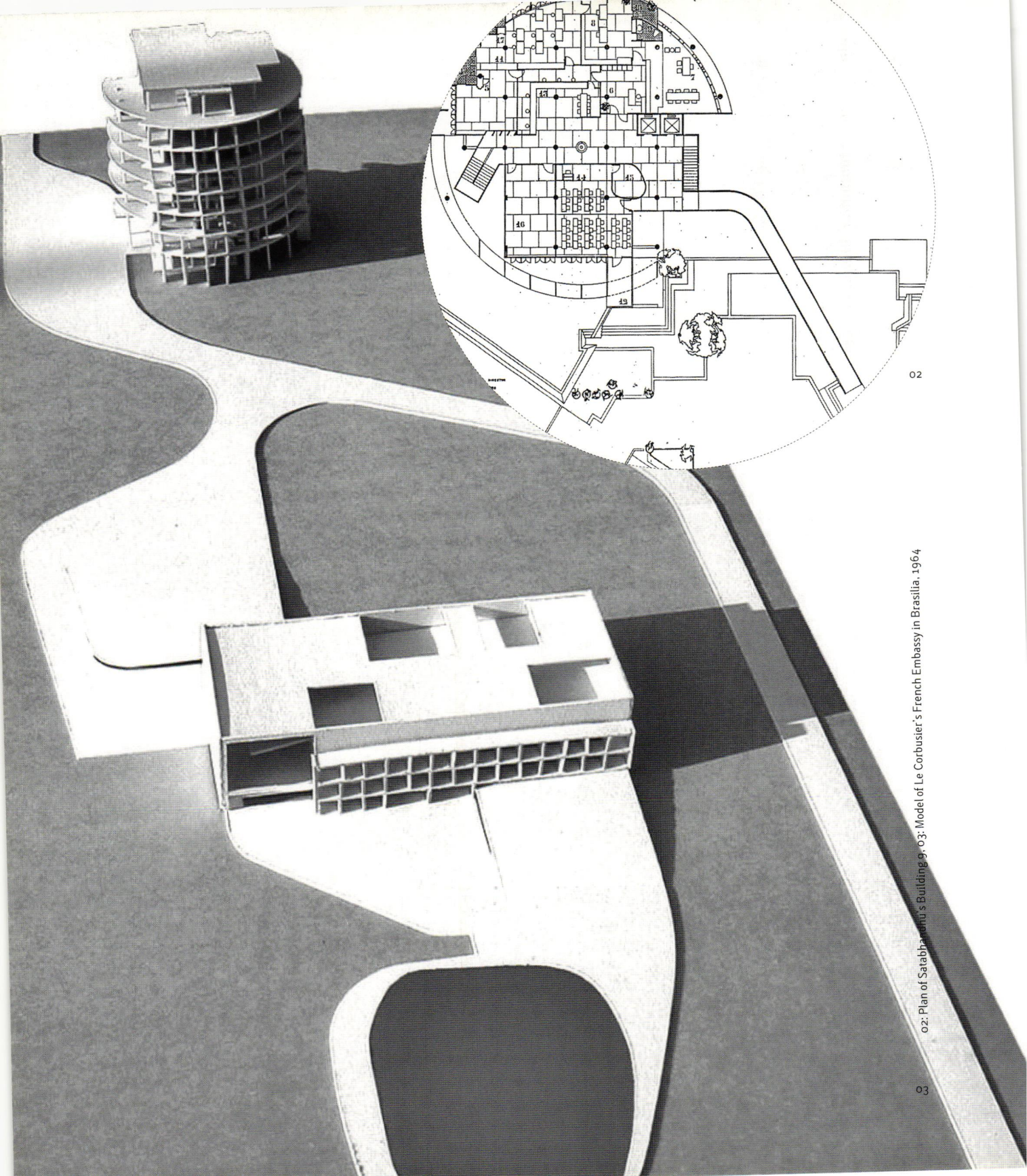
nated those spaces instead for building and academic administration. In addition to these programmatic adjustments, Ongard also expanded the Embassy shading system to protect the entire circumference of the façade from the Bangkok sun and added an exterior fire escape to the east side to satisfy the local building code – an element that would later prove to be the distinguishing feature from the Le Corbusier's original scheme [figs.1,4].

The *found object* strategy extended further to the aesthetic modifications of Building Nine, with many of the few modifications having themselves been taken from other well-known modern buildings, including other works by Le Corbusier himself. The curved ramp of Le Corbusier's Carpenter Center of the Visual Arts at Harvard University [1962; figs.10,11], the mushroom capitals of his Chandigarh Assembly Hall [1953-63; figs.6,7], and the sculptural water tank on the roof of the Unité d'Habitation in Marseille [1952; figs.14,15] all make an appearance in Building Nine, as do the principles of flat slab concrete construction (from Le Corbusier's "five points") and the average European ceiling height as defined by Le Corbusier's *Le Modulor*. And although Ongard is later quoted as saying that Building Nine "owed a lot to Le Corbusier," the brick circular cutaway to the ground floor directly quotes Louis I. Kahn's arch at the Indian Institute of Management in Ahmedabad [1962-74; figs.12,13], and the oddly juxtaposed and incongruous auditorium on the top floor is also borrowed from James Stirling's expressively sloped auditorium at the Engineering Building at the University of Leicester [1963; figs.16,17].³ Ongard even takes cues from the postmodernist Robert Venturi by prominently displaying the letters "PB" atop the exterior wall of the auditorium, a billboard-like advertisement in the manner of Venturi Scott Brown's Seattle Art Museum (1984-91).

Salient features of Ongard's design not found in prior Modernist examples were the open ground floor and the particular classroom type. The ground floor of Building Nine was set on columns, seemingly in accordance with Le Corbusier's use of pilotis. In fact, however, this

01: Expanded Embassy shading system, Satabhandhu's Building 9





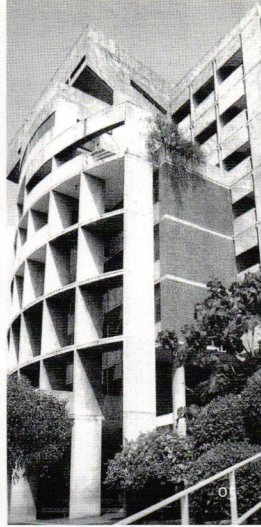
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02: Plan of Satbhavani's Building 9; 03: Model of Le Corbusier's French Embassy in Brasilia, 1964

03



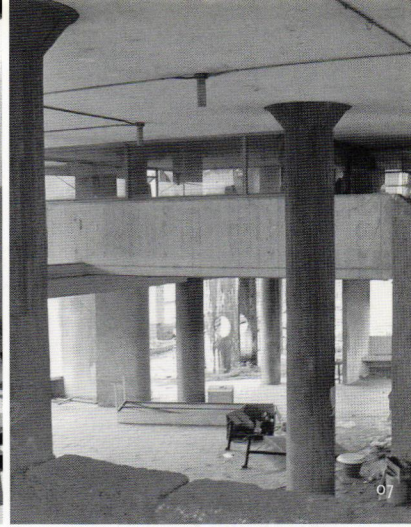
Exterior fire escape on east side of building, Ongard Satabhandhu's Building 9



Ongard Satabhandhu's Building 9 at Panabhandhu School, 1969



Mushroom capitals, Le Corbusier's Chandigarh Assembly Hall, 1961



Mushroom capitals, Satabhandhu's Building 9

decision relates more to the traditions of the vernacular Thai house; rather than using the ground floor's openness solely for the sanitary reasons that Corbusier prescribed,⁴ Ongard opened the entire space for natural indirect lighting, ventilation, and social activities – traditions inherent in Thai culture.⁵ Its multi-purpose program was enriched by the integration of stairs, benches and tilted walls to encourage active use, appealing to the Thai preference for outdoor public spaces. When configuring the classroom arrangement, Ongard offered an alternative to the conventional Thai school design of single-loaded corridors of classrooms terminating in administration. By separating the classroom from the faculty area, Building Nine modified the traditional Thai student-teacher relationship to encourage more self-discipline among the student body. Finally, Ongard's regionalized alterations extended to the landscape, as he eschewed Le Corbusier's use of massive concrete plazas (found at Chandigarh and elsewhere) in favor of tree-lined public spaces that created a pleasant student atmosphere while lowering the ambient temperature.⁶

Polarized Reception: West vs. East

As a radical break from the emphasis on "originality" taught by Western schools, Ongard's Building Nine was panned by Western architectural critics of the day, who referred to the excessive transplantation as demonstrative of an "immature appreciation of Modernism."⁷ Nevertheless, the new building was extremely well-received in its native Thailand, where critics perceived it as a socio-cultural phenomenon: a conjunction of Modern architecture and the local context. Architecture in Thailand already had a strong history of cultural adoption and assimilation, due in no small part to the shifting borders and multiple cultures that have been historically endemic to the Siam area; thus, the nature of the Thai reaction was hardly unusual. The Grand Palace at Bangkok features several examples of architectural importation, including the model of Angkor Wat commissioned shortly after the Siamese occupation of Cambodia [fig.9], and the hybridized Chakri Maha Prasat Throne Hall designed in 1876 [fig.8]. The Throne Hall, with its juxtaposition of a Thai roof on Baroque imperial architecture, is of particular importance in relation to Building Nine, since it was the first indication of Western influence on Thai culture.⁸

Like the Angkor Wat model and the Throne Hall, the popular interpretation of Building Nine's transplantation and imitation was shaped largely by the power of social image. King Rama IV commissioned the model in order to illustrate to the Siamese people the vast cultural wealth of their empire.⁹ His successor, Rama V, commissioned the Throne hall to symbolically reinforce the country's modernization by requiring a Western-style classical revival.¹⁰ As a result, the Khmer and Baroque styles of the model and hall both made their way into the Thai architectural tradition. Building Nine, although not a governmental building per se, held similar prestige due to its association with the elite and royally-sponsored Panabhandhu School.¹¹ Thus, the building's widespread acceptance similarly allowed Modernism to arrive in Thailand.

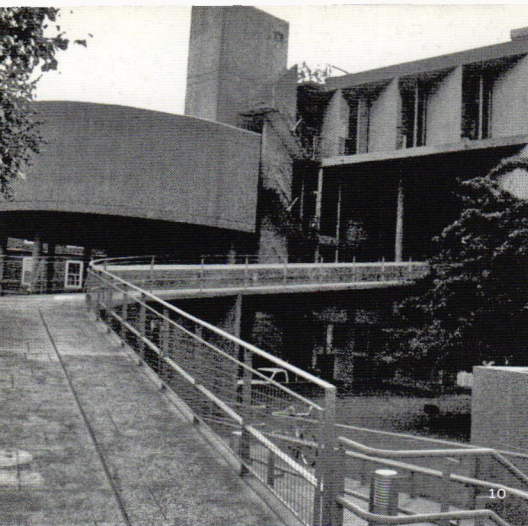


Chakri Maha Prasat Throne Hall at Bangkok's Grand Palace, 2008



09

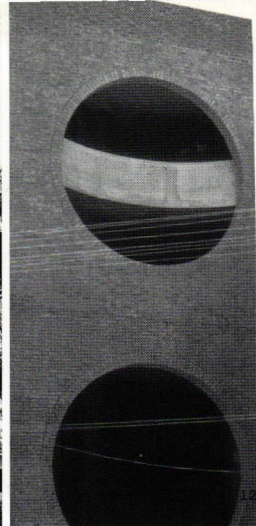
Model of Angkor Wat at Bangkok's Grand Palace, 2008



Entrance ramp, Le Corbusier's Carpenter Center of Visual Arts at Harvard University, 2005



Entrance ramp, Satabhandhu's Building 9



Brick circular cutaway, Louis Kahn's Indian Institute of Management in Ahmedabad, 1988

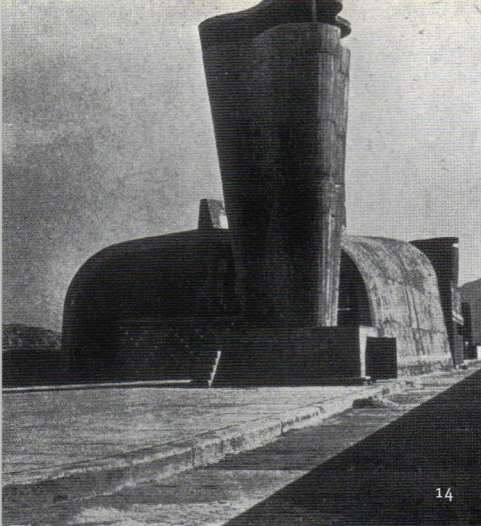


Brick circular cutaway, Satabhandhu's Building 9

What is Original, Anyway?

The construction of Building Nine emphasizes the subjective nature of originality in the context of adaptation or imitation. Western academia's negative attitude towards Ongard's emulation reflects a culture that frames "originality" as an act of conceptual generation. In Thailand - a developing country with a history of cultural conquest and assimilation - the appreciation of form and its social and political ramifications is considerably more important; "originality," then, is determined directly by architecture's successful adaptation to Thai soil. Generally unconcerned with the difference between "authentic West" and "imitated West", the success of Building Nine comes from the limited moves Ongard took in making Le Corbusier's Embassy design appropriate for use as an academic building in the middle of Bangkok. His sensitive modifications - the exaggerated shading system, the double loaded corridors, and the modified open ground floor, all of which satisfy the physical needs of the Thai lifestyle - are only important insofar as they remain emulations of other Modernist motifs, while his inclusion of Modern and Postmodern elements from other buildings help to reinforce a progressive image of the Thai state and its people. So although the means of Modernism's entrance into Thailand challenged certain Western attitudes vis-à-vis architecture, the perception of the building's nuances and slight variations softened with the social and cultural context. Building Nine becomes a clear manifestation of a cultural conjunction in the context of Modernism, an easy dialogue between architecture and the local culture, mirroring the introduction of Thai Colonialism as the royal architectural style one hundred years before.

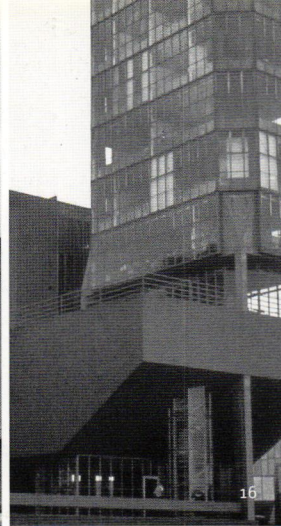
What comes out of the Building Nine narrative is the question of how far must one move from the original template in order to be considered "original". Between Western and Thai academia, the perceptual difference - at least in terms of form - is considerable. However, at its heart, the construction of Building Nine reveals the nature of originality as culturally subjective. Is Building Nine plagiarized? Largely, yes. But is Building Nine original...?



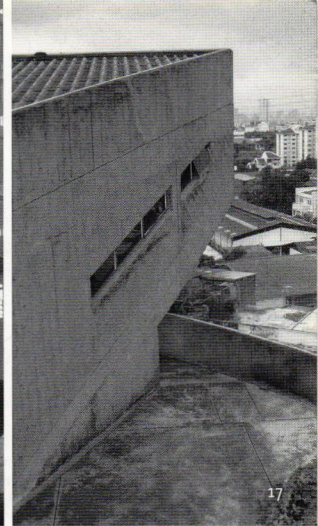
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15



16



17

Sculptural water tank on the roof, Le Corbusier's Unité d'Habitation in Marseille, 1952

Sculptural water tank on the roof, Satabhandhu's Building 9

Sloped auditorium, James Stirling's Engineering Building at the University of Leicester, 1959

Sloped auditorium, Satabhandhu's Building 9

Endnotes

1. Ongard Satabhandhu, cited in John Hoskin, *Bangkok by Design* (Bangkok: Post Books, 1995), 118.
2. The argument of this paper is mainly drawn from one exhaustive account of this important work. One of them is Ongard's undergraduate thesis at Cornell University: Ongat Sattraphan, "Pana Bhandu School Redevelopment, Bangkok, Thailand" (M.Arch Thesis, Cornell University, 1965). This thesis was done under the supervision of Professor Colin Rowe.
3. Hoskin, *Bangkok*, 119.
4. *Almanach d'Architecture Moderne* (Les editions G. Cres, Paris, 1926).
5. The lifting of the traditional Thai house is mainly for an amphibious function: avoiding the constant flood and humidity, providing security from wild animals, and creating a supplementary living area under the house. It also acts as a multi-purpose area for storing goods, engaging in cottage industries, and sheltering boats during the rainy season. Horayangkura gives an interesting comparison to the design strategy of the Modern master: the stilt feature inspires analogous architectonic expression of Le Corbusier with regard to manifesting Modernism in his five-point manifesto. See Vimolsiddhi Horayangkura, "The Architecture of Thailand, Change Amid Continuity: The New Challenge", *Transforming Tradition in ASEAN country*, edited by Jon Lim (Singapore: Unique Press, 2001), 234; and Sumet Jumsai, *Naga: Cultural Origins in Siam and the West Pacific* (Oxford: Oxford University Press, 1988), 86-7.
6. "Education and culture were means of social control." Panabhandhu School was one of the first boarding schools in the country. The founders of the school had a vision of a better education that included healthiness, discipline, and community; the owners of this private school believed that this could only be achieved using the learning environment of a boarding school. Whereas most schools were public, funded by government, Panabhandhu School was a totally private institution (the name of the school was a mixing of the two founders' last names: *Pananonda* and *Satabhandhu*). This independence allowed the leaders of the school to use any teaching styles they saw best for the students. See Edward N. Saveth, "Education of an Elite", *History of Education Quarterly*, vol. 28, no. 3 (1988), 367-86.
7. Vimolsiddhi Horayangkura categorized this as "towards Modernity in architecture through imitation." He also added his skepticism in using an extreme term *plagiarism* since there was a particular positive in provoking the understanding of the cultural transformation, thus he compromises by describing it as a "direct assimilation." See Horayangkura, "The Architecture of Thailand", 248-9.
8. More incisive studies of what indicates Western influence on Thai culture can be found in Non Arkaraprasertkul, "An Unexpected Introduction of Modern Architecture in Thailand", *Examining Cultural Constructions*, edited by Robert Cowherd (Cambridge, MA: HTC/AKPIA, Massachusetts Institute of Technology, 2006).
9. Thais experienced the first image of "Modernism" from the monuments of the early twentieth century. The monuments themselves were not cultural artifacts of Thai culture, but were "civic elements" through which meaning was derived from the precedent in the Western world, like Napoleon's arch and the Washington Monument. See Michael R. Rhum, "Modernity and 'Tradition' in 'Thailand'", *Modern Asian Studies*, no.30, vol. 2 (2006), 338-41.
10. John Clunish, a British architect, was commissioned to design the *Chakri Maha Prasat* Throne Hall (1876-82) by King Maha Chulalongkorn. It was originally designed in Renaissance style with three domes on the top. The design of the roof, however, was changed because Somdet Chao Phraya Borom Maha Sisuriyawong, who was an important figure in the country's "Cultural Identity" movement, was concerned about the image of the palace; he suggested that it should still be mainly characterized as a traditional Thai style building. Therefore, he suggested the alteration of the roof, from the domes to *Krueng Yord*, Thai-style decorate pitch roofs. The Throne Hall, thus, demonstrates this duality as a "crash of two different cultures". The fact that no one, Thai or foreigner, questions the cultural "authenticity" of the Throne Hall seems to indicate the successful appropriation of Western style architecture then transforming it into "modern" Thai architecture style. See Horayangkura, "The Architecture of Thailand", 237.
11. Non Arkaraprasertkul, "A Sudden Appearance of Modernism in Thailand," in "Keeping Up - Modern Thai Architecture 1967-1987," *Exhibition Catalog* (Bangkok: Thailand Creative & Design Center [TCDC], 2008).

Image credits: Fig. 3 courtesy of Pol Esteve, Montse Pardo, Judit Urgelles/ Universitat Politècnica de Catalunya. Fig. 5 reprinted with permission from Thailand Creative and Design Center (TCDC), Bangkok. Fig. 2 courtesy of Ongard Sattrabhandhu. Figs.1, 4, 7, 11, 13, 15 and 17 courtesy of Polnon Prapanon, Karmchet Karmna, Todsapon Yuttasak, and Preecha Mahirun. Fig. 10 courtesy of Non Arkaraprasertkul. Fig. 6 courtesy of Aga Khan Visual Archive, MIT. Fig. 12 courtesy of Alfred De Costa. Fig. 16 courtesy of Rotch Visual Collections, MIT. Figs. 8-9 courtesy of Ming Ye.

Design for the Apocalypse

John McMorrough

16

Invoking the “apocalypse” brings forth connotations of the end of the world - historically imagined as everything from the judgment of God to nuclear Armageddon. In its contemporary manifestation it has taken the form of various global crises; whether environmental, economic, or the unexpected. Of course, the “end of the world” is not a novelty; it has its own history and is itself a genre of expression as a category of pessimism. A recurrent theme, it is the shadow of the progressive ideal of the avant-garde. It seems that at this juncture, *utopia*, that place of high aspirations and lofty ambition, has been the motivating conceit for a society (and an architecture) of aspirational perfection for quite some time, but across the spectrum of culture there has been a recent turn from the utopian to the apocalyptic, in forms both fictional and factual. With the intermingling of the improbable and the prosaic (think Katrina and *The Day After Tomorrow*, or 9/11 and *Children of Men*), the consideration of the apocalyptic is no longer a matter of fantasy,¹ but of policy (one recently referred to as “disaster capitalism”).² What we see in this latest manifestation is not merely the conservative position describing a fall from grace, or the entropic decline of systems and the diminishment of quality over time, but a description of a new prevalent condition. If Utopia is an unattainable goal, a literal no place, then the apocalypse is everywhere.³

The question is, of course, why apocalypse now?

The genre of the apocalyptic always contains within it a means of working through the problematic of its era. The term itself indicates as much: “Apocalypse” from the Greek “*ποκάλυψις*” literally translates as a “lifting of the veil,” and represents, as a concept, the disclosure to certain privileged persons of something hidden from the mass of humankind. Its occurrence in narrative is a symptomatic response to the larger issues, though it reveals the limits and fears of the society that wrote it. For us, it is a combination of factors, it is both global warming and sub-prime loans, it is nuclear terrorism, and social ills. All are real and all are, to some extent, constructs.

The real issue with the various evocations of the “end of the world” has never been about “the end,” but a beginning. Anthony Burgess, author of the dystopian classic *A Clockwork Orange*, once commented that the “warnings” of apocalyptic tales about the end of the world were really a kind of wish-fulfillment.⁴ In a world of overwhelming complexity, of zero-sum economics and peak-oil, the apocalypse comes in, not as problem, but as answer. The “end of” also implies a “beginning of” - a chance to re-start and re-think. At the level of fantasy the apocalypse represents the chance to begin anew; the end of the world always represents a new start, a chance to have another, unencumbered, go at making the world. In this sense the specter of the apocalypse is another version of the modernist *tabula rasa*, a leveling of the past to make way for the future.⁵

So the end of the world is but a re-orientation of sensibility. We can already see evidence of this in the new emphasis on the basic conditions of our existence. What unifies these manifestations is their survivalist undertone.⁶ The operation of the subject in an environment is not only a thing, but also an action, a mechanism that



*DON'T WAKE ME
FOR THE END OF
THE WORLD UNLESS
IT HAS VERY GOOD
SPECIAL EFFECTS.*

Roger Zelazny

calibrates itself to need. This mechanism is never in stasis; its needs are never in perfect equilibrium to the available means. Thus, it is *scarcity* (of food, water, safety, resources, amenity or potential) that is the engine of transformation and change in a variety of environments (natural and artificial, economic and ecological – namely architecture, landscape and the city).

These impulses, in light of this symbolic (and increasingly real) economy, can be seen as having strange portents for the projects of architecture. How would architecture act in a post-apocalyptic mode? And what is the relation of architecture to capital when there is no capital? If we understand architecture as a historically formulated set of rules and guidelines, then the future of architecture looks dim. One could imagine its on-going continuation, but in a material enactment of an increasingly archaic form of thought. Eventually architecture's status may be that it becomes a fixture of the university - as a testament of the plenitude of an earlier humanism - next to the Classics department, as just another repository of dead languages.

Or, one could imagine the re-description of architecture's disciplinary legacy in terms of effectivity (as opposed to affectivity), with an emphasis on the agency of design as a responsive, problem solving effort. If this sounds like an environmental call to arms, with the earnestness of LEED and green design, of responsibility and stewardship, preservation and prevention, it is not (at least not completely). There are issues of responsibility, of course, but that is not the only manifestation, or even the most useful. The new mode would want to address matters of concern; where environmental matters are no more or less important than others (such as aesthetic or social) in terms of cause or need. The coming apocalypse may or may not be a solvable problem, or it may not be a problem at all, but its existence as even an idea demonstrates a shift that is not only practical, but conceptual.⁷

To shift from the utopian to the apocalyptic is not merely to set the terms in an opposing relation, but to understand their similarity. Both describe a condition of radical change; turning from one to the other as a privileged mode doesn't speak to a preponderance of nihilism per se, but to a fundamental recalibration of the imagination (specifically, architectural imagination) from issues of plenitude (of capital, of resources, of attention) to those of scarcity. How would architecture act in a post-apocalyptic mode? One can imagine that the answer will not come *ex nihilo*, but rather would be seen in architecture's response to the imperatives of survival, in how it responds to coming disasters major and minor. The results will not be definitive, but indicative, of directions to follow and refuges to find, bomb shelters of utopia in which to weather the approaching maelstrom.

So: design for the apocalypse, the time is neigh, and the end (of something) is near....and the beginning (of something else) is imminent.

Endnotes

1. See Kiel Moe's "Observations of the Concept of Place in Post-Risk Societies in Recent Fiction," *Places*, vol. 20, no. 2 (2008), 42-43.
2. See Naomi Klein's *The Shock Doctrine: The Rise of Disaster Capitalism* (New York: Metropolitan Books, 2007).
3. This usage is a reference to the Utopia of Sir Thomas More, within whose famous work of a perfect imaginary island there is the irony that the perfection is not only imaginary, but in a sense impossible, as "utopia" means, literally, "not place" (as translated from the Greek οὐ, "not", and τόπος, "place"). The positive associations attributed to Utopia are in fact the domain of the homophonic "Eutopia" (as derived from the Greek εὖ, "good" or "well", and τόπος, "place"), to which it is clearly related, yet significantly distinct.
4. Anthony Burgess, "The Art of Frivolity," *Times Literary Supplement* (12 June 1992), 22.
5. The extent of the renewal motif with the apocalyptic can be found not only in religious contexts such as the second coming of *The Bible's* "Revelations" or the restarting of the Mayan calendar in 2012 with a new epoch, but also in its literature. Cormac McCarthy's *The Road* (2006), one of the more depressing entries in the genre, in the end (spoiler alert) offered a hope for the future with the son. The extent of this implicit optimism with the end of times can be seen as even extending past "humanity". For an envisioning of post-human ecology see Alan Weisman's *The World Without Us* (New York: St. Martin's Press, 2007).
6. One of the more interesting specimens of this genre of recent apocalyptic fiction as both indictment and wish fulfillment is James Howard Kunstler's *World Made by Hand: A Novel* (Atlantic Monthly Press, 2008), which extends the arguments regarding the depletion of the world's oil supply made in *The Long Emergency: Surviving the End of Oil, Climate Change, and Other Converging Catastrophes of the Twenty-First Century* (Grove Press, 2006). In the novelization the result of the extended energy crisis is both worldwide economic and political collapse, as well as an increased supply of fresh churned butter, made possible by the newly agrarian existence. For a further discussion of Kunstler's *Long Emergency* see my own "The Future of Fuelish Building" in *VOLUME 7* (2006).
7. A seminar conducted at the Ohio State University Knowlton School of Architecture last winter examined how the idea of the "apocalyptic" appears in various narrative forms (films, novels, reports, games), and considered its relation to historical and contemporary environmental design in architecture, landscape and city planning as indicated in projects such as Noah's Ark, Biosphere II, the Seed Bank in Spitsbergen Norway, Wagner's *Götterdämmerung*, the "Left Behind" book series and the George A. Romero "Zombie" films.

Concrete Variations

Entry from an Encyclopedia of Calamity Mollifying Devices for the Modern Metropolis

Elijah Huges

20 *The architecture of these castles has brought with it a specialised language and imagery of division...Iraqis know them simply as 'concretes', borrowing the English word. But for those who construct the barriers, both military and civilian contractors, there are subtle differentiations. There are 'Hescos', the vast, circular wire-covered bins of river gravel, originally designed for flood defences and now used to withstand the biggest bombs. Then there are the waist-high Jersey barriers, and the T-barrier also known as the Texas barrier and as the Bremer barrier after the US proconsul of Iraq, Paul Bremer, in whose time the first 20ft high blast walls appeared. It is the blank, grey, soaring face of these T-barriers that has come to be the symbol of the new Iraq.*

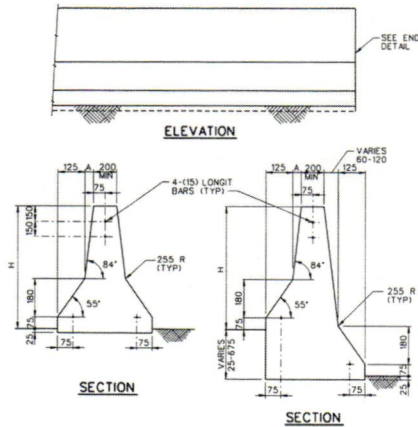
Peter Beaumont, *The Observer*, Sunday, March 18 2007

The mutation of any given architectural emergency device frequently occurs in response to threat evolution and market competition, leading to variation within a family of closely related devices sharing a common reference point or mythical source. Like the exterior fire escape, automatic sprinkler, or theft alarm, the Jersey Barrier is an invention which may be understood as part of a crumple zone intended not to prevent urban disaster, but to absorb, limit, and contain its effects. Developed by the New Jersey Department of Transportation (NJDOT) in the 1950's, the concrete roadway barrier commonly known as the Jersey Barrier became the formative variation in a hardy, expanding family of "portable" or "temporary" Precast Concrete Barriers (PCBs or TPCBs). Proving exceptionally adaptable to new geographies and new applications, the Jersey Barrier was ready for production and deployment on a large scale, without definitive spatial identity, and suitable for use in new or existing construction. Over time, new performance parameters, field discoveries, and barrier situations prompted further experimentation with empirically established profiles. In a self-perpetuating cycle, increased variation offered increased range and increased range prompted further variation.

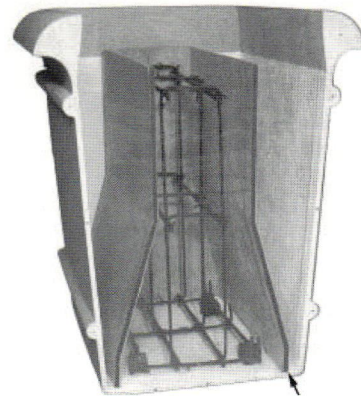
Like most architectural emergency devices, the Jersey Barrier was designed to compensate for a particular architectural or urban shortcoming and to operate responsively and specifically within definable spatial parameters. While the origin myth of the Jersey Barrier is linked to that state's highways, the history of concrete barriers deployed for traffic related applications in the United States can be traced at least as far back as the mid-1940's when the state of California began experimenting with the use of concrete barriers on highway US-99, both as a traffic management measure and to reduce maintenance costs associated with post-collision repairs to the wood and metal systems then in widespread use.¹ In New Jersey, concrete barrier experimentation began in 1949 in an effort to address a significant increase in the number of cross-over, head-on collisions occurring on the state's undivided highways. Of particular concern were situations where other existing barrier methods - such as wide center medians or deformable metal barriers - were impractical due largely to the relative density of development along roadways in New Jersey, a state already on a trajectory to becoming the most urbanized in the country.

Systematic crash testing was not initially undertaken. Instead, barrier design was modified and improved as performance data was accumulated, and shortcomings observed, in the field. Growing from 19 inches to 32 inches in height over the next decade, by 1959 the distinctive sectional profile of the NJDOT Barrier had evolved [fig. 2]. The Jersey Barrier sectional profile emerged as a means of transitioning the horizontal velocity of a vehicle vertically and reducing its overall momentum without causing grievous harm to the vehicle's occupants. As such, the profile was a literal rotational folding and compression of the horizontal buffer space of the roadway shoulder or the median into a vertical thickness. Evaluation and analysis of the barrier's effectiveness undertaken by researchers at the Stevens Institute of Technology in the 1960's was conclusive: "The 'Summary of Motor Vehicle Traffic Accidents' for the year 1964, compiled by the traffic Safety Service of the New Jersey State Division of Motor Vehicles, shows that of a total of 198 two-vehicle accidents, occurring between intersections, 115 involved





NJDOT "Jersey Barrier" Profile, 1959



Planter Security Barrier System (PSBS), 2006

22

fatalities (58 percent). None of these occurred on any road segment on which New Jersey had installed concrete center barriers 32-inches high."² What is more, "historically, the accident record of a road section improves in direct relation to the amount of barrier installed."³

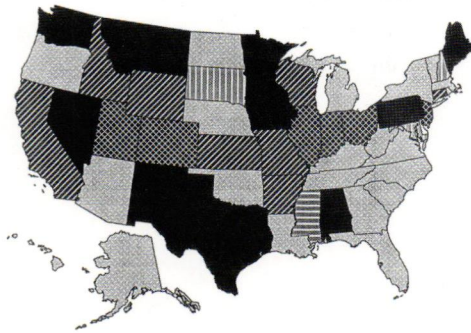
By the end of the 1960's, California had adopted the Jersey Barrier for roadway applications, followed by nearly every other state [figs. 4, 5]. Globalization would follow. After introduction to the European market in the early 1970's, the Jersey barrier became the standard concrete roadway barrier for a number of countries where steel barrier systems had been predominant previously, including Belgium, Denmark, France, Germany, Spain, and Switzerland. Through this process of expansion, "Jersey Barrier" lost the specificity of its geographical and historical context and became instead a term used to describe shaped concrete barriers in general, effectively expanding its brand recognition from a specific device to a family of related products.

Although the historical Jersey Barrier profile remains the most common concrete barrier profile produced, testing and development of alternative profiles have also been ongoing. In 1976, The National Highway Protection Agency (NHPA) undertook a parametric study of six concrete barrier profile variations, labeled A through F. Using both computer simulations and full-scale crash tests, the F-shape was found to be the most effective profile.⁴ However, in part because its shape was almost identical to that of the Jersey barrier, the F-shape has not superseded its predecessor, which also performed well in the study's systematic crash testing. Instead, most states simply added it to the list of acceptable concrete barrier profiles for roadway applications. With public and private investment in the historic profile already established, in the form of model specifications and precast concrete formwork, future variations would consistently come to coexist or compete with, rather than supplant, the historic type [fig. 8]. Other notable variations include the GM barrier, designed and marketed unsuccessfully by the company in the late 1970's, and the "constant-slope barrier," added to the profile set in 1989. In the case of the latter, the primary advantage

is that its performance, like its slope, remains constant, independent of adjacent conditions.⁵

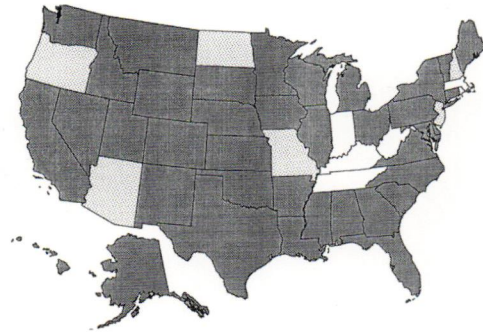
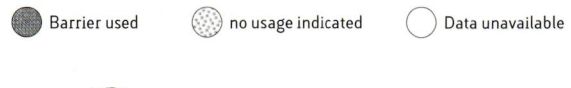
The relative success of properly installed Jersey Barriers in limiting the penetration of even large-scale vehicles at both acute and frontal angles, evidenced by a growing volume of roadway accident data and crash tests, facilitated not only a migration to highways around the world, but also from the high-speed roadway to densely populated downtowns, national monuments, and a growing list of public and private sites with security interests. Its effectiveness in managing the potentially deleterious effects of speed and explosives on the city - from runaway trucks to car bombs - both provided an expanded range of applications, and further stimulus for the development of situation-based variations.⁶ "For years, the security barrier has been seen as inconvenient, unsightly, and bothersome, and in its crude form, it still is. As a result, its use has often been limited due to aesthetics. Now, the lowly barrier has been rediscovered as the primary multipurpose tool in our security and force protection toolbox. It is now being used for a variety of purposes, most notably for access control, traffic management, blast mitigation, ballistic protection. When we speak of barriers most people think of the concrete jersey barrier. . . Though it is the most visible and often used, it is only one member of the barrier family."⁷

Just as "Jersey Barrier" has come to be used as a general term assigned to waist-height pre-cast concrete barriers, whether in conformance with the historic profile or not, some variations have acquired their own categorical designations as well. For example, "T-wall" and "Alaska Barrier" are terms used to describe large barrier types with only generally defined profile parameters, the former marked by a readily identifiable T-profile, the later by its 20' height.⁸ As variations have increased to address ever more specific situations, the range of spaces defined or demarcated by PCBs has expanded. Frequently, the overall size and profile shape of the PCB are selected, or even customized, in response to site specific conditions for spatial delineation, containment, or perceived threat.



04

States currently installing or maintaining the NJ shape concrete median barrier.



05

States currently installing the New Jersey roadside barrier

In addition to their engineered profiles, many PCBs are equipped for permanent installation or anchoring, are designed to accommodate cross-flow drainage, have attachment points along their tops, and connection hardware at their ends to allow multi-barrier linear systems to be formed. These augmentations to fundamentally solid product lines have also enhanced the potential range of the PCB. Indications that PCBs are in the terminal condition new architectural emergency devices move through before becoming provisionally invisible - absorbed into the everyday fabric of the city while remaining visually present - include their recent adoption and embellishment by architects and designers, as evidenced in designs for PCB planters, PCBs with stamped concrete finishes imitating field stone, and PCB-focused Harvard GSD thesis projects [figs. 3, 6].⁹ As an engineered device, the Jersey barrier can be quickly deployed and reconfigured without compromising its performance, which relies primarily on its empirically shaped, and highly refined, distribution of mass. Among its strategic advantages - durability, extensive field history, mass-producibility - has been its portability. However, with attention from designers, the PCB begins to meld with its environment, blending into its architectural or urban surroundings, permanently claiming territory by provisionally securing it through uncompromising means. As with emergency devices in general, the most popular designs are those which aestheticize the device while still revealing or referencing its visual presence. Decoration and ornament remain the preferred methods for assimilation [figs. 1, 7].

Total invisibility is undesirable. The PCB's effectiveness has come to be attributed to both its physical performance and its visual identifiability. As with most architectural emergency devices, PCBs have come to represent safety, independent of their physical provision for it or the specific application for which they are deployed. This supplementary accumulation of symbolic value is often cited as a contributing factor to overall performance and is also frequently referenced in industry literature. According to the National Precast Concrete Association, "Precast concrete barriers, which are normally used in high-

way applications, are being used more frequently as protection against unwanted vehicular traffic and terrorist activities around government buildings, utility facilities, historical landmarks and airports. Their imposing appearance and mass provide excellent protection properties. In many areas, the barriers adorn their surroundings with a decorative coat of paint."¹⁰

With or without this adornment, PCBs also take on the role of a supplementary architectural enclosure, offering blast - rather than thermal or vapor - protection. Their deployment produces an interiority or spatial difference at once definitive and highly flexible. Originally designed to solidify the lines of the road - to mark difference in more certain terms than paint¹¹ - the portability and reconfigurability of the PCB also renders architectural solidity flexible, the scale and configuration of the city and its infrastructure potentially redefined by the installation speed of a particular PCB product.¹² Having proven adept at negotiating the relationships between horizontally articulated buffer spaces - as defined by blast zones, speed reduction distances, or areas of visibility - and vertical containment, variations from the global family of PCBs currently define the borders of the Green Zone in Iraq and form the recently constructed barrier separating traffic between Israel and Palestine, while others continue to protect cars from potentially wayward traffic on the New Jersey Turnpike.



CalTrans Stacked Stone Texture on Concrete Barrier Type 60, 2003

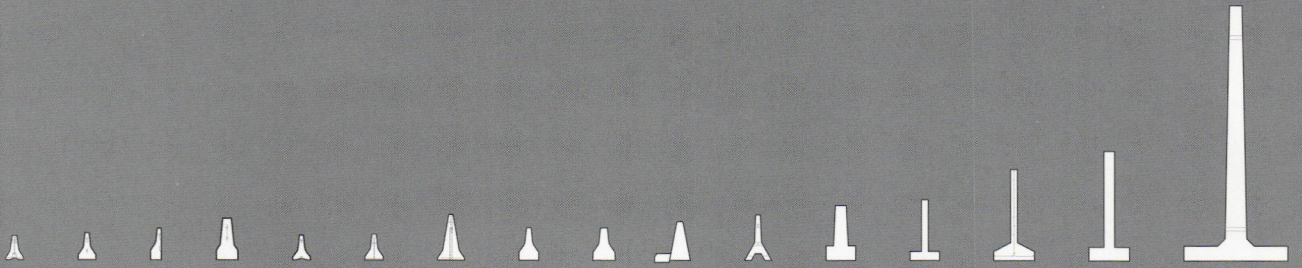


Concrete Jungle, Tattfoo Tan, Painted Jersey Barriers, New York, 2007

Endnotes

1. See Malcom H. Ray and Richard G. McGinnis, *Guardrail and Median Barrier Crashworthiness: A Synthesis of Highway Practice*, NCHRP synthesis 244, Transportation Research Board, National Research Council (Washington, DC: National Academy Press, 1997).
2. M. Peter Jurkat, "Highway Center-Barrier Investigation, Part 1. Accident Analysis" (Stevens Institute of Technology: Davidson Laboratory Report No. 1138, June 1967), 1.
3. *Ibid.*, 3.
4. See M. E. Bronstad, L. R. Calcote, and C. E. Kimball, Jr. *Concrete Median Barrier Research*. Report FHWA-RD-86-191, (Washington, DC: Federal Highway Administration, March 1976).
5. For more on the developing regulatory standards for the production and use of PCBs in the U.S., see Dean Alberson, "A Stricter Standard for Crash Barriers," in *Standardization News* (West Conshohocken, PA: ASTM International, February 2004).
6. For more on the history of the car bomb and its implications for the city, see Mike Davis, *Buda's Wagon: A Brief History of the Car Bomb* (New York, NY: Verso, 2007).
7. Robert Reaves, "Barriers Revisited: New Possibilities with an Old Capability," in *Military Police Professional Bulletin*, PB-19-2-01 (Fort Leonard Wood, MO: March 2002), 1.
8. For more on the allowable tolerances for T-walls procured by the U.S. Military in Iraq, see for example Josh LeCappellain, "'Concrete Warriors' Protect Soldiers in Iraq" (Camp Victory, Iraq: American Forces Press Services, October 9, 2008).
9. For PCB planters, see for example recent products from Planter Security Barrier System (PSBS) line by STONEWEAR, Inc. of Carson City, Nevada; for PCBs with stamped concrete finishes imitating field stone, see for example California Department of Transportation (CalTrans), *California Highway Barrier Aesthetics Report*, Edition 1a, June 2002; for a recent PCB-focused Harvard GSD thesis project, see for example "Beyond the Wall," *Metropolis Magazine*, February 2008.
10. National Precast Concrete Association (NPCA), "Transportation Products: Precast Concrete Highway Barriers (Quality, Value, Permanence)," brochure, 2.
11. For a project offering a telling counterpoint to this transition, see Francis Alÿs' performance painting of "The Green Line," originally drawn as the armistice boundary between Israel and Palestine in 1948: "SOMETIMES DOING SOMETHING POETIC CAN BECOME POLITICAL AND SOMETIMES DOING SOMETHING POLITICAL CAN BECOME POETIC."
12. For machinery currently in use for rapid concrete roadway barrier installation and reconfiguration in the U.S., see for example the Barrier Transfer Machines (BTMs) currently in production by Barrier Systems, Inc. of Rio Vista, CA; for installation speeds of larger PCBs for military applications, see for example Mike Pryor, "Construction Complete on 'Safe Neighborhood' project in Adhamiyah," Press Release No. 20070604-02 (Baghdad, Iraq: Public Affairs, Multi-National Division, June 4, 2007).

Image Credits: Fig.1 courtesy of ALI YUSSEF/AFP/Getty Images. Fig. 2, 4, and 5 reprinted from *Guardrail and Median Barrier Crashworthiness*. Fig. 3 courtesy of Stone-
wear (r) Force Protection. Fig. 6 reprinted from *California Highway Barrier Aesthetics Report*, edition 1a, June 2002. Fig.7 reprinted with permission from www.lower-
manhattan.info. Fig.8 courtesy of the author.



o8

Portable Precast Concrete Barrier Variations, 2008

Roadside

Mark Jarzombek

01

26



In August 2008, Vikram Prakash and I took a road trip through southern India as part of our research. On the way, we encountered numerous wonders of architectural design that have not yet been admitted into the architectural canon. Here are some samples from our photo journal.

More photographs from the Roadside series can be found on pages 42 & 43 and 90 & 91.

Roadside Rossi



Roadside Eisenman

Algorithms as Difference Engines

Caroline A. Jones with Benjamin Aranda of Aranda/Lasch

28

In the span of time between 1667 and 1847, there were two Britons – John Milton and Charles Babbage – who negotiated difference, albeit in radically different ways. Industrial modernization (Babbage) produced difference as a calculable sum, where the epic religious poet (Milton) had seen it as a navigable sign:

the Angels met
Jacob in Mahanaim, where he saw
The field Pavilion'd with his Guardians bright
– Milton, *Paradise Lost*, Book XI, 1667¹

Here, the word “pavilion” is a verb – the rolling countryside of Milton’s imagination *pavilion’d* with the sublime wings of guardian angels, fluttering emblems signifying a terrain in which Biblical time and the future of England commingled, and the difference between secular and divine was a matter of will and interpretation. For Victorian engineer Charles Babbage, on the other hand, difference was to be automated for minimum error and maximum utility in the struggle to produce invariant numeric tables for the use of scientists, navigators, and surveyors, but of most burning necessity for actuaries in the burgeoning new commercial insurance trade.

The two seemingly unbridgeable epistemes emblemized by Milton’s evanescent signs of divinity and the laboring gears of Babbage’s mechanical calculator have merged rather spectacularly in recent art and architectural collaborations – notably, the 2008 pavilion commissioned by the Thyssen van Bornemisza Art Contemporary fund as part of a series that has lately included Olafur Eliasson / David Adjaye in parallel and dialogue with the Serpentine Gallery pavilion series (which has included works by Eliasson/Kjetil Thorsen, Rem Koolhaas, Toyo Ito, and Frank Gehry). The latest complex collaboration is spearheaded by artist Matthew Ritchie, who titled the pavilion *The Morning Line*. Opening in Seville in October 2008, it joins Ritchie to architectural designers Benjamin Aranda/Chris Lasch, plus architectural engineers Daniel Bosia/Arup AGU [Advanced Geometry Unit], plus sound designers Bryce Dessner, Florian Hecker and Luc

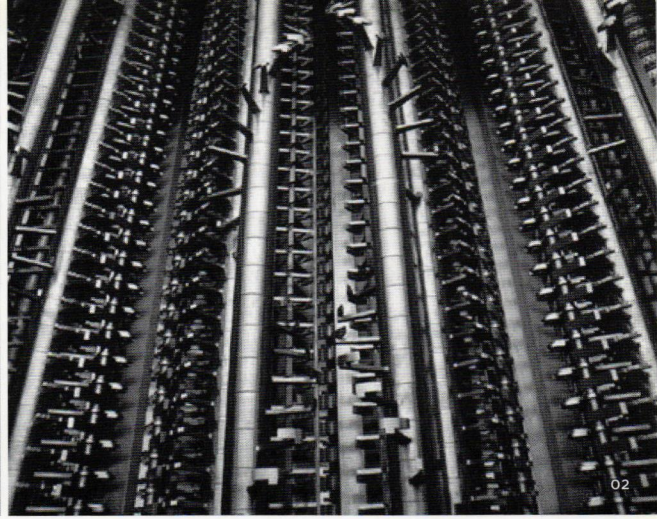
Dubois, plus projection designers Nick Roth and James Case – a complex amalgam hereinafter called R++. For R++, narrative, myth, and algorithmic calculations come together to negotiate difference at both mathematical and cultural levels. As with Babbage’s difference engines, the algorithms are merely utilitarian – the uses to which they are put remain socially embedded and full of craft, aiming at signification and interpretation, much like an actuarial table or a religious tract.

Pavilions, of course, have always been more important in architecture than their supposed ephemerality would imply. In modern times, the evanescence once implied by “pavilion” became granitic: as in Mies van der Rohe’s canonical 1929 Barcelona pavilion, or the Georgian pile built to signify the U.S. nation at the Venice Biennale. *The Morning Line* comes closer to what Milton had in mind, engaging an algorithmic practice that generates “building” as a progressive tense. Perforated, open, and clustered with what seem like bubbles framed in steel, *The Morning Line*’s “drawing in space” resists modernist stasis to mount a transitive action on the ground.²

In preparation for a catalogue essay on the pavilion, I interviewed Benjamin Aranda about the processes that yielded this modular, crystalline, and chaotic “anti-pavilion” (per Ritchie). What emerges from the interview edited below is that the algorithms at the core of this project are not blueprints but propositions that generate forking paths: do this; if that results, then do this; if something else results, then do that. Crucially, Aranda/Lasch introduce the stochastic not by feeding in random numbers, but by intermittently interrupting the algorithm to allow collaboration, craft, and intuition in their design process.³ They tinker with Babbage’s engine because form, not capital risk, is their stock in trade. Intuitively aiming for buildable, scalable, and fractal forms, the architects altered the algorithm so their craft could function, marrying the difference engine to poetic form. Architecture might take this lesson more broadly, learning to renovate the aging computational notion of the algorithm by using more open-ended practices that transform the false permanence of “building” (noun) for “building” (verb).



The pavilion in Jean Froissart's "Genoese besieging Mahdia, in Tunisia" (1390)



Charles Babbage's Difference Engine No. 2

Caroline Jones: What algorithms did you use for *The Morning Line*? From your previous book, *Tooling*, we know where you ended up: with tiling and modular boulders.⁴

Benjamin Aranda: It's about coming up with ways of packing space so there are no gaps, to fill out the networks. It should be said that while you can use algorithms to derive the shapes, *The Morning Line* itself is built by hand; usually people speak of algorithmic design as using computational code to automate a process. In all the projects in *Tooling* we did write code, in order to automate the processes of production. In *The Morning Line* it is algorithmic thinking in that it is procedural, rule based, systemic. But we didn't actually code it in the computer – it was almost too complex to come up with a geometric framework that we could absorb Matthew's drawings with.

Caroline Jones: That's powerfully similar to the way Matthew's art works more generally. He generates all these structures and then he proceeds intuitively, as does the viewer. Was that your experience of the collaboration?

Benjamin Aranda: That's totally it. The thing with Matthew's work is that once you're in it, you're inside this systemic drawing. We could unpack it in many ways – as a visual language of religious, iconographic, scientific knowledge. But it's also a way of creating narrative loops that cross and intertwine. It was Daniel Bosia of Arup in London who had recommended that Matthew work with us, and it turned out we were maybe six blocks away in New York.

Caroline Jones: Such is the global economy!

Benjamin Aranda: Well, you're supposed to outsource in the global economy. Anyway, we were brought in, and it was interesting for us – we have a way of approaching these very rigid procedures where we really like to use a sense of craft and intuition. Craft, because there are a lot of connections between craft techniques and computational techniques...

Caroline Jones: This lies at the very origin of computing—the craft of weaving needs the computational techniques of the Jacquard card-driven loom, the craft of tabulation eventually needs the computational sophistication of Babbage's Difference Engine. One of the less-noticed aspects of Babbage's machine is that its ultimate goal was to produce *printed results*—to reduce the final component of error introduced by the human scribe.

Benjamin Aranda: Yes, these procedures involve willfully entering into a kind of choreography in order to discover things along the way – for us, it has to be rooted in a formal technique that's legitimately novel in a way. It pushes the boundary of known geometric possibilities. In this case we discovered that we could pack out space using this one shape, the truncated tetrahedra. It not only compacts, but it could do so in a three-dimensional packing fractal way.

Caroline Jones: There's a break between the simple algorithm, which has a determinate end, and the stochastic algorithm which is designed to generate changing outcomes. How – or do you – introduce randomness, the stochastic, the aleatory? Perhaps the random for you is the intuitive.



Benjamin Aranda: We are often asked about the sense of randomness in our designs – sometimes it is literally coded in there, as a random variable that generates seemingly random effects. But as we know there is no randomness. Even randomly generated, computationally produced [random numbers] are kind of fake in a way. Even if something seems loose, we're trying to introduce other orders. Even if we don't know what those other orders are yet, we have a feeling – and this is where intuition comes in – that you might be able to sense order. So there's not really a randomness but a looseness that lets us control the narrative. If anything this project is about moving from an open geometric framework to a specific visual language.

Caroline Jones: When you release control, it's not to a number from outside, but rather to the process of collaboration itself. It's something where you loosen the structure to accommodate this narrative possibility.

Benjamin Aranda: Yes, absolutely. The whole point of this exercise in procedural thinking is not necessarily about producing complex shapes, but about producing opportunities. They can take many shapes, they can be within the project and they can also inform the project, in the way that Ritchie's narratives do – I mean (laughs) take your pick, Milton to Q.E.D. What was important to us as architects was to come up with a framework that could sometimes loosely reference those narratives but other times specifically capture them.

Caroline Jones: Can you give me an example of an instance in which a specific reference would be coded into the structure?

Benjamin Aranda: One is that the universe expands. The model of the universe is a legitimate model – whether the model is as big as a pavilion, whether the model fits into the palm of your hand, or whether it's at the scale of the universe, it's always systemically reproducing the kind of inherent order of matter wanting to expand. I mean, we don't have the expansion coefficient set exactly to what the universe has as its expansion coefficient, but we wanted something that could be about expansion. The second issue that is really important at the geometric level is that it's producing networks and can loop back into itself. This is not a small detail; it took us months to figure that out. We had to truncate

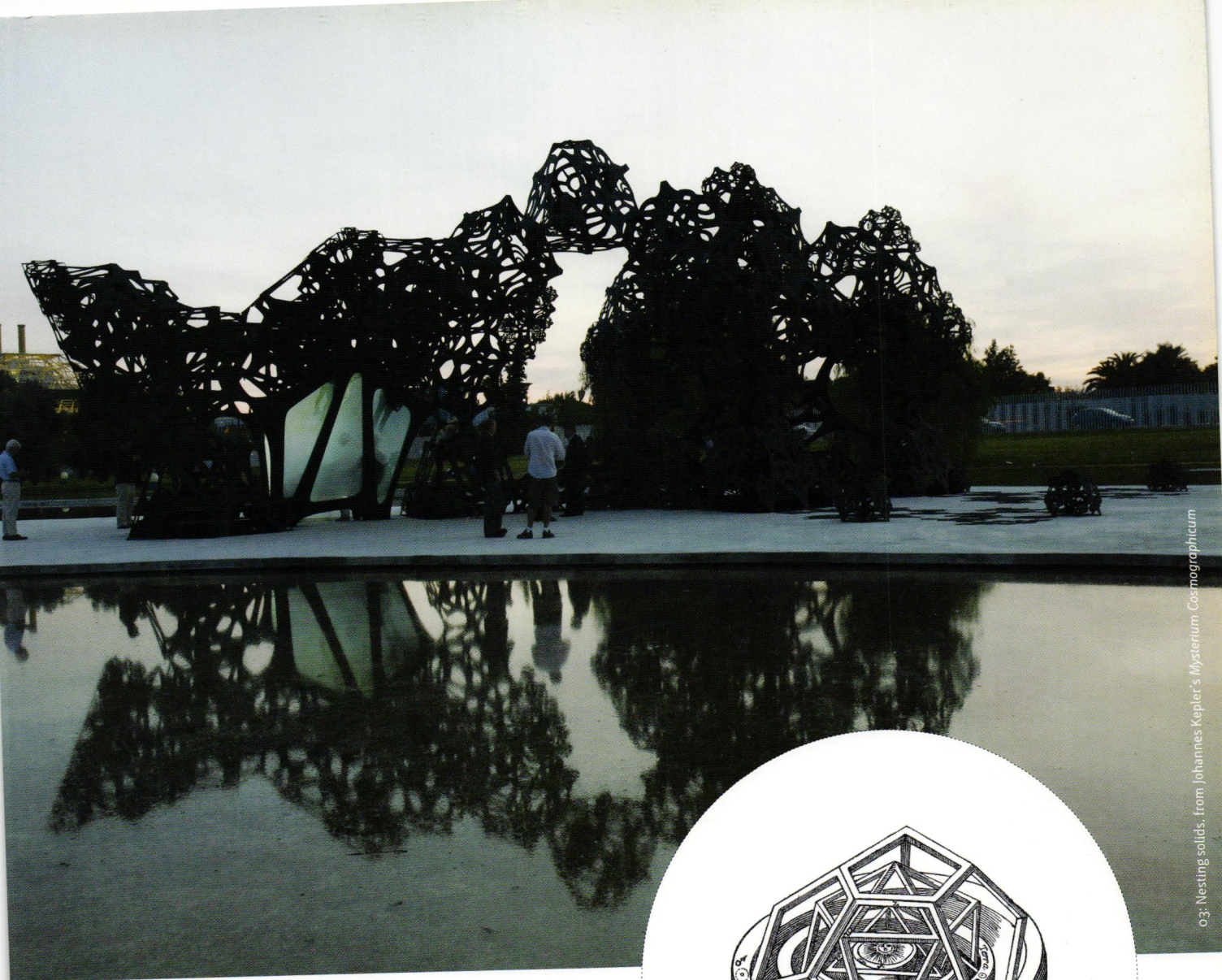
the tetrahedron in such a way that as it connected to itself it would basically produce a ring after a certain number of units, it would come back to its origin point. If you truncated it too little it would intersect and become irrational. There's one way of truncating the shape that it both produces these fractals and produces these rings. The rings are really important because they produce predictable structure, and not only that, they produce lattices. Lattices you can understand as many rings tied together into structure.

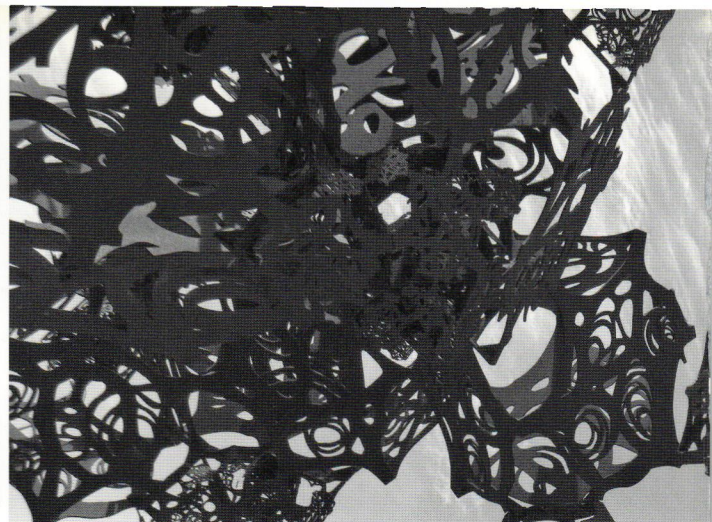
Caroline Jones: They become buildable. It's sort of like Kepler, there's some order there, and you tweak it until you get the perfect solids that nest. So there's a play between the intuitive twiddling that gets this gorgeous buildable structure to emerge, and the core geometries that you're tweaking to get there.

Benjamin Aranda: Yeah. We understood the universe as something that needed to expand but also something that needed to build space. And what builds space is matter. And the kind of matter that we want to explore is built out of crystals – crystallographic structures which are repetitive, stable, and buildable entities.

Caroline Jones: That's interesting because from Ruskin to Smithson people have thought of the crystalline as built of angles, as angular. Yet we sense in the designs that you've generated a more organic sense – of bubbles, say, such that when they meet they create flat surfaces where they touch.

Benjamin Aranda: The project is not only about geometry, it's about expression – what Matthew Ritchie would call a semasiographic structure, a [holographic] visual language. There is nothing other in the project than its language. The lines themselves and the drawings are the structure, and produce the space. We believe you can only get to 3-D tiling and procedural space through the drawings. Sometimes you can just see the visual language, scribbles, hieroglyphics, and other times you experience the horizon line – the underlying geometric structure. You can have this kind of toggling between the framework and expression, between geometric ideal and a narrative specificity. That toggling is itself a kind of experience of reality. And that's what we wanted to





produce in this project, where you can basically sense the geometry at work, something that was systemic and reflected an actual theory of the universe.

Caroline Jones: That does correspond to one of the deep structures of neuronal aesthetics, the pleasure that we have in experiencing fractals. In terms of the algorithm, much of its uptake in architecture is about a progressivist aim at the future, yet what is striking about Ritchie is his attempt to hold onto everything from the past: Lucifer, Voodoo, etc. How does that feel for you as architects? Perhaps you've been there done that with postmodernism's relation to a historical past, but what is your architectural relationship to this narrative past?

Benjamin Aranda: There is one line that we as architects really hold on to in *Paradise Lost* where Adam is shown a vision of the future of a flooded world and it's implied as his fault. What we needed to proceed from that point was a vision of the anti-pavilion. It's not a normal pavilion in that it's not about an optimism of the future, more like an apology for the future, it's imagining what exists after the second fall. It's this sort of blackened steel frame, a charred ruin of a future monument.

We were really excited because Matthew asked us to fail in a spectacular way. What we will make is a kind of wager at best – *The Morning Line* might be a picture of the universe, it's the best chance we have, we're using the leading theories of the universe's laws from some of the leading physicists, we're applying the most advanced geometric principles that we can get our hands on. It might be right or it might not be, but in any case, in 150 years it will be a ruin.

Caroline Jones: This reminds me of Smithson's paraphrase of Vladimir Nabokov who had said that the "future is but the obsolete in reverse," where for Smithson, the failed urbanism of Passaic became "ruins in reverse."

Benjamin Aranda: It's an anti-pavilion, but without hubris. We've replaced that optimism with a looming sense of humankind's ability to fall – the literary narratives from Milton intertwine with the cosmological narratives coming from Princeton physicists and Columbia trained architects. I've always seen myself and our role as architects as one of the

players in this poker game that Ritchie has set up.

Caroline Jones: On the literal future of this pavilion: Matthew said it was being built in a modular way, with a demand for dispersion? I've discussed it as a kind of "contained infinity." Each time it's built it will be in a different site and perhaps a different modular combination, creating infinite possibilities.

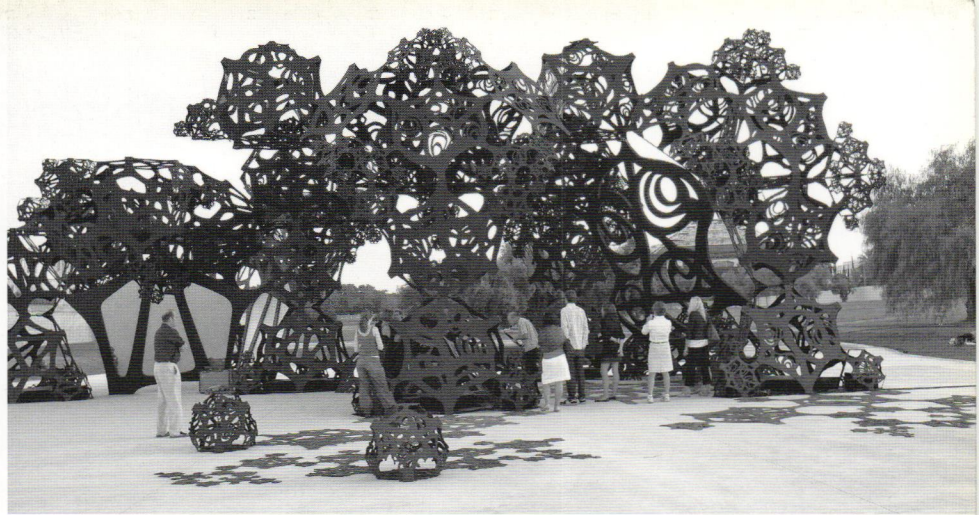
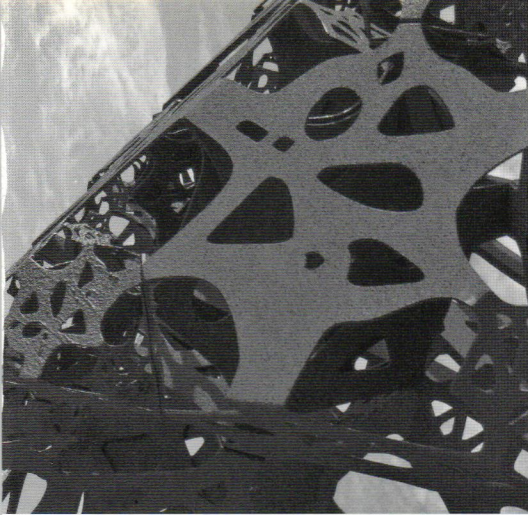
Benjamin Aranda: It's conceived as a cycle in a way, literally as an infinity sign in three dimensions. [Physicists] Neal Turok and Paul Steinhardt's new theory of the universe (which is not proven at all) is that the universe is going in cycles and is being rebuilt every 14 billion years or so. So for us it was important that the structure be cyclical ... using the fractal logic, it can be a cycle with multiple points of entry. The narratives might have beginnings and ends but you understand all the narratives as a movement around a center, this cosmological model of *The Morning Line*, itself a kind of universe... like a bunch of brackets, the biggest bracket being at the scale of the universe itself. I hear myself saying this and I know it sounds grandiose and kind of crazy, but these are the terms of the project, and for an architect that was pretty fun.

Caroline Jones: It's a model, and we don't get confused that we are actually in the universe, although we are at every point actually in the universe. But – I say this hypothetically – we imagine that we are in a model of the universe in the best way of good art and architecture: that we seamlessly inhabit it even as we are allowed to develop a conceptual space for reflection on its implications at other scales. It's the Wittgensteinian game: you have to know the rules, and then you have to be able to "forget" them in order to play. Internalize, but be capable of reflection.

Benjamin Aranda: Exactly.

Caroline Jones: What part was played by Arup and Bosia?

Benjamin Aranda: They are hybrid engineers and architects. They're very much interested in complexity and nonlinearity. We complement them well, because we're able to convert a project's deeper intentionality into a design concept. So that it's more than a system, it becomes a project. I think ultimately a real problem is brought in by using the word "algorithm" – in a way I wouldn't care if you never used the word algo-



rithm when describing this project, it's sort of been polluted. It's misunderstood as more technocratic rather than project oriented; we approach it as more of a novel concept-generating tool. And so does Arup's Advanced Geometry Unit. They've been doing this a lot longer than we have. And like us they write their own code, they are trained computationally but also really interested in design that produces opportunities and conflict, this stochastic or random thing that you were pointing out earlier. They're very systemic in a way but also leave things open.

Caroline Jones: Yes, but am I correct that some people might introduce the stochastic by buying a bunch of Monte Carlo numbers and punching them in there, where what you are doing is actually releasing yourself from the algorithm momentarily to have an intuitive engagement with the process, as design? Those two kinds of stochasticisms are pretty different: intuition and craft as randomizers versus "pure" mathematical randomness.

Benjamin Aranda: Yes, that's cool. But that's not to say that we don't appreciate the more mathematical randomness. One certainly loves noise. But you're right, there are many ways to invite the random; they might be programmatic, or not; they might be computational, or not; so that's a really great way of putting it.

Tooling is about how we build our own tools. And most people come back to us and they think *Tooling* is about writing computational code. But for us, the most powerful tools that we have built are the ones that make looking back at history a very productive kind of act. Usually, by writing code, you can rewrite history, a little bit, between the lines. We try to position different narratives about history as tools, which, in a way, become algorithms that you can use to redefine your present. We don't talk about it too much because it would almost ruin it – but we consider *Tooling* a way to reconsider chapters of history that were otherwise closed. We find ourselves really fascinated by it. That's why working with Ritchie was great – his artwork is about that. We are finding ourselves influenced by him on a very deep level. We don't want to copy his style, it is his artistic language, but we feel a deep affinity with him.

Caroline Jones: And I think conversely Ritchie in some ways finds in your practice a way to redescribe what he's doing in a deeply contemporary way. In other words, the admiration is mutual.

Benjamin Aranda: If somebody wrote that then we'd be very happy. (laughs)

Caroline Jones: (laughing too) Well, maybe someday somebody will.

Endnotes

1. This passage comes from Milton's discussion of Jacob seeing "Guardians" (Angels) bright on the fields of Mahanaim, online at http://en.wikisource.org/wiki/Paradise_Lost/Book_XI.
2. "Drawing in space" originated in modernist discourse with the direct welded sculptures of Julio Gonzalez and Pablo Picasso in the 1930s – an appropriate art historical allusion for *The Morning Line*'s inauguration in Seville.
3. Interview with Benjamin Aranda on 9 June 2008. All quotes from Aranda are from this interview unless noted otherwise.
4. Benjamin Aranda and Chris Lasch, *Tooling* (Princeton Architectural Press, 2006).

Image Credits: Fig.1 courtesy of the Bibliothèque nationale de France. Fig.2 courtesy of the British National Museum of Science. Fig.3 reprinted from Johannes Kepler's *Mysterium Cosmographicum*. Pavilion photographs by Todd Eberle, reprinted with permission from the Thyssen-Bornemisza Art Contemporary.

The words on a page

In an open book

Looked stupid to

Me when I was little

Unless I was right up close

To them. They looked

Weak; barely

There.

It made me nervous

That in order

For words on a page

To have power

I had to be close.

I had to be close.

Ariana Reines,
Coeur de Lion¹

What would it be to try to tell you the whole story? After Nietzsche, Hegel, Hitler, and, well... the Bush Administration, the project would be not only reckless and naive but also inherently terrorizing. Yet what if the story I wanted to tell wasn't political, per se? What if it was personal, intimate: something as close as love? Would that change the outcome? Would it unbalance the income? And can we even find a place within or without late capitalism to consider the following accounts?²

Of that account:

I would like to introduce you to two ex-lovers. In truth, however, all I can really proffer is the one-sided textual remainder of love gone bad, a prose poem entitled *Coeur de Lion* and written by Ariana Reines in 2008.³ If the figures presented by Reines were real (this love, these people, this tale), it might break your heart to know it's all ended. But, with at least a 50% disadvantage, the text in question can only tell us that two figures (in the world, on the page, is there a difference?), met, fell, and loved until she broke into and read his gmail, where it all dissolved at the point of a perfidy in pixels.⁴ That's the back-story: reductive, inadequate, and ultimately, I must admit, false for its insufficiency. Like all tales of a break-up, it is only at best one side of the story. Add to that disadvantage that we're dealing with words, with pages, and a book published post-amour and the question of truth dissolves with the love described. Given these complications and partialities, perhaps we can't even identify these figures, these two exes, with physical persons. Perhaps they are something more of Maurice Blanchot's *il* and *elle*, closer to abstract philosophical placeholders than flesh and blood recalled and recoiling on paper.⁵ And if they were only literary, would that in fact make them more or less real?

I thought about you and how scary it is

The way you keep your distance

And I thought about the cherishing feeling

I sometimes have for you.

Thinking about a person. Surely

That act releases something

Into the atmosphere. A toxin?

Now that I am not addressing you

But the "you" of poetry

I am probably doing something horrible and destructive.

But this "I" is the I of poetry

And it should be able to do more than I can do.⁶

Whether flattening lives into lines on a page, or ascribing body to written figures, Reines' work (quoted in part above) reminds us that the available dialogues addressing dissolving subjectivities and relationships are pervasively inadequate. This inadequacy is born neither in the poetry produced nor in the one we traditionally point to as the producer: from within the terms we have at our disposal to think through the mergers (uncomfortable or otherwise) of biography, philosophy, and poetry we, as readers, as writers, reviewers, and reminders, are inevitably short handed. As Roland Barthes writes:

I cannot write myself. What, after all, is this "I" who would write himself? Even as he would enter into the writing, the writing would take the wind out of his sails, would render him null and void – futile; a gradual dilapidation would occur, in which the other's image, too, would be gradually involved (to write on something is to outmode it)...⁷

Accordingly, in the writing of a lover's discourse (whether an ex or otherwise) both the writer and the written erode in the writing. But does this mean we are left with nothing, or is it possible that another sort of production, something other than imagined re-production, is taking place? Thank god for Martin Heidegger, I suppose... for if, as Heidegger said, speakers are not only vehicles but also the products of the spoken, perhaps these "I's" of all sorts are some sort of self productive modes.⁸ If Heidegger has it right, literary figures, philosophical texts, and embodied ideas may then constitute the moment of self-relating, which

Slavoj Žižek describes in *The Parallax View* (2004) as follows:

...Neural self-relating designates the magic moment when neural activity no longer circulates around the input that triggered it, but generates its own 'object,' the focal point around which its activity circulates. ...If, then, self-relating means here that there is no 'subject' previous to activity ('that which' acts is 'self-positing,' the result of its own activity), in what, precisely, does the difference between the subject and the insubstantial 'object' that is the attractor consist?⁹

In short, what Žižek points to in the lines above is that the subject becomes the call that it answers. Louis Althusser's concept of interpellation and Judith Butler's work on performativity point to this same phenomenon, as does Michel Foucault's work on subjectivization.¹⁰ Yet, does *The Parallax View* give us any better terms for handling the difference between bodies of flesh and bodies of work (as if they were so easily separable)? Žižek writes:

In the documentary *Derrida*, in answer to the question of what he would ask some great classic philosopher if he were to meet him, Derrida immediately snaps back: "About his sex life." Here, perhaps, we should supplement Derrida: if we asked this question directly, we would probably get a common answer; the thing to look for, rather would be the theory about sexuality at the level of each's respective philosophy. ...What accounts for the weird (if not – for some, at least – tasteless) character of this exercise is not the reference to sexual practices as such, but the short circuit between two spheres which are usually perceived as incompatible, as moving at ontologically different levels: that of sublime philosophical speculation and that of the details of sexual practices.¹¹

In *Coeur de Lion*, Reines' narrating "I" throws images of herself, her former relationship and her prose-try headlong toward something of the "sublime philosophical speculation... of sexual practices" which Žižek alludes to above while confusing and confounding those practices with and in a story of diffusive love.¹² Triangulating piercing innocence in the face of love and tenderness, acute philosophical and theoretical understandings in constant dissolution, and brassy sexual terminology, Reines (and her narrator? As her narrator?) revisits the lyric poem in an age where personal emotion laid out by an all knowing "I" is rarely tolerated. It is a bold move in a time when writers have instead turned to anti-humanisms like those espoused by Heidegger in order to avoid the violence of volitional wholisms. Yet, it is more than just boldness that necessitates Reines' fallback to the lyric form: without volition, without the private-I, even our most intimate emotions must be made into something external. Addressing this head on, Reines writes:

Between "democratic estimations" of purportedly objective standards and "'events', as things that happen to..." Reines works the boundaries of the contemporary subject. On one side (again as if this were as simple as something like a box, with sides...), working against the impossibility of metaphysical objectivity, the Heideggerian subject is one that is given by language. To (over)simplify, unlike the Cartesian subject who is a self-productive center, the Heideggerian subject does not produce, but is produced by language and its events, resulting in a strange and estranged sort of passivity which cannot tolerate the "I" of the lyric poem.¹⁴ Further estranging this "I", the Heideggerian subject gives rise to later "evental" subjects, such as those of Alain Badiou which are the results not of language exclusively, but of political actions, global shifts, and militant events.¹⁵ Žižek's work in *The Parallax View* is an attempt to resuscitate the "I" of (lyrical?) agency while acknowledging its inherent limitations and fundamental passivity, post-Heidegger. In this work he comes very close to *différance* as it was iterated by Jacques Derrida.

In his impressive book *Transcritique*, Kojin Karantani endeavors to assert the critical potential of such a 'parallax view': confronted with an antinomic stance in the precise Kantian sense of the term, we should renounce all attempts to reduce one aspect to the other (or, even more so, to enact a kind of 'dialectical synthesis' of opposites); on the contrary, we should assert antinomy as irreducible, and conceive the point of radical critique not as a certain determinate position as opposed to another position, but as

Trying to see the proportional relation
Of one memory to another
One is so strange, and then
To try and see what looms
And doesn't for the other person
Who was there, it gets stranger,
Especially when you've read
His email.
I don't know how people
Understand their lives, measure
Their sensations against "objective"
Or so-to-speak democratic estimations,
Whether people accept the externality
Of events, "events", as things
That happen to them. I refuse
To accept some coagulate
Of other people's
Impressions in exchange for this
Privacy, no matter how flawed it is.
This is lyric poetry. It has to be. It has
No other hope...¹³

the irreducible gap between the positions itself, the purely structural interstice between them. Kant's stance is thus "to see things neither from his own viewpoint, nor from the viewpoint of others, but to face the reality that is exposed through difference (parallax)."¹⁶

While *différance* is, for Derrida, "neither a word, nor a concept" it alludes to the inherent deferral and differing of language. For example, the word or concept of "woman" is only possible in that it both refers to "lady", "girl", "women", etc but also differs from each of these terms. "Woman" is possible in language because it is both singular (i.e. able to describe a particular "woman") and repeating (i.e. able to reference but not absorb other ideas of "woman"). One could almost say that *différance* parallels "the purely structural interstices" between signifiers. Yet, Žižek has long been an opponent of deconstruction and the repercussions of Derrida's work and writing. While we see in what follows that Žižek turns to Lacan over Derrida's Heidegger for back-up, how is it that *The Parallax View* proposes an understanding so closely tied to its own nemesis?¹⁷

Nowhere is this structure [of the Parallax] clearer than in the case of Lacan's *objet petit a*, the object cause of desire. ...L'*objet petit a* can thus be defined as a pure parallax object: it is not only that its contours change with the shift of the subject; it exists - its presence can be discerned - only when the landscape is viewed from a certain perspective. More precisely, *objet petit a* is the very cause of the parallax gap, that unfathomable X which forever eludes the symbolic grasp, and thus causes the multiplicity of symbolic perspectives. ...The paradox here is a very precise one: it is at the very point at which pure difference emerges - a difference which is no longer a difference between two positively existing objects, but a minimal difference which divides one and the same object from itself - that this difference 'as such' immediately coincides with an unfathomable object: in contrast to a mere difference between objects, the pure difference is itself an object.¹⁸

In this discourse on the minimal difference, perhaps the difference between Žižek's parallax and Derrida's *différance* can be clarified: whereas Derrida would see the moving of *différance* as language's unending deferral, Žižek's parallax results in the production of "difference as an object." At the same time, as Žižek recounts, "at its most radical the object is that *which objects*".¹⁹ This object then is both a passivity and a production:

Thus the paradox is that the roles are reversed (in terms of the standard notion of the active subject working on the passive object): the subject is defined by a fundamental passivity, and it is the object from which movement comes... But, again, what object is this? The answer is: the parallax object.²⁰

In this a terminology of the "object which objects" the "minimal difference" between the literary and the non-literary "I" emerges. Going back to Reines and her "Jake":

*I missed you. I did not fully
Grasp the sweetness, the errors
In what you wrote. You wrote to me
With this delicacy
Concertedly, and I couldn't take it
Seriously. I mistrusted it but I
Think I also loved it. Maybe I did not
Love it, but I loved you. I wrote back
Like this: "Jake, I'm
In Munich. I think I'll visit Dachau
Tomorrow. I barely spoke
For the seven hours we were
In the car. The mountains are stupefying.
That was my explanation. I miss you.
I left you an envelope in the lobby.
I have to go now. Love,
Ariana."²¹*

In the above, "Ariana's" slip between the "it" of the writing from Jake and "Jake" himself repeats the minimal difference Žižek writes through in *The Parallax View*. In the story Reines' poem tells above, "Jake" is produced for "Ariana" in what he wrote. "Jake" is the minimal difference - yet how can we say this? Reines writes to this confusion with the lines, "I mistrusted it but I think I / also loved it. Maybe I did not / Love it, but I loved you." Which "you" (the literary or the "real") is precisely what is mirrored and at stake. And while this slip between signifiers (I, you, Jake, etc) is again very close to Derrida's pronouncement that there is "nothing outside the text", Žižek's claim is that something does come to exist of Jake and Ariana, again, at the point where neural activity becomes self-productive. "Jake" and "Ariana", in this case, become objects of Reines' making just as Reines' is being made in the minimal difference/parallax object created between herself and her writing.

This minimal difference is why love, biography and philosophy are only what they make of themselves, between themselves. There is no origin outside of activity and even that activity stands in a double bind between product and produced.

Alain Badiou, on the last day
Of his class, said, "Because an event
Is pure rapture, an event disappears
Immediately; it does not exist
Objectively, but only by appearing
And disappearing." This is both
Precise and vague; it is attractive
I guess. I guess since you and me did not
Disappear immediately, it was
Not pure rapture, not in these
Terms, but my smile
Was real each time I swallowed
Your come.²²

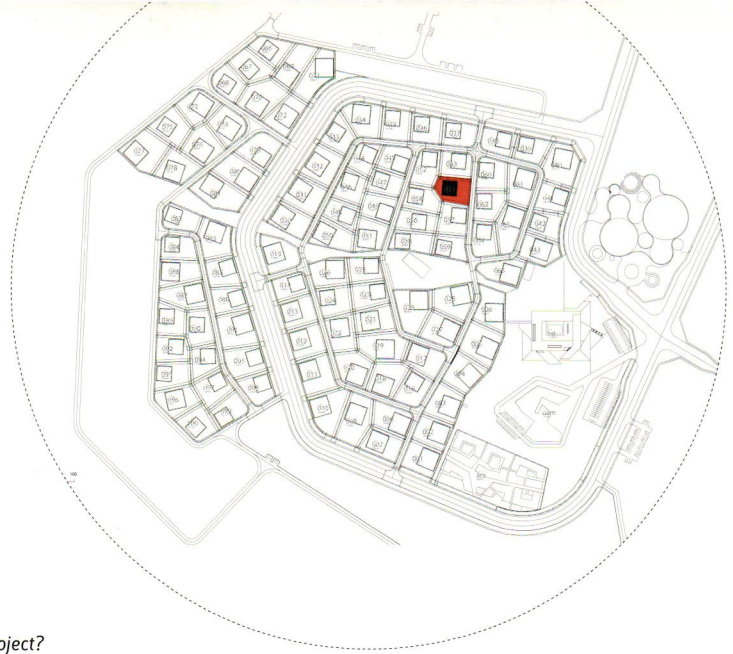
If neither Derrida nor Hegel left behind a systematization of their sexual lives, this gap is being filled by writers and poets who are students, subjects, and objects of contemporary biography. Reines' work, *Coeur de Lion*, may be (at least, as it is certainly more than that as well) what Žižek hoped Derrida meant when he expressed interest in some philosopher's sex life: it is a theorization in-situ, in production, in print. It produces the object of investigation which is not the theorization alone nor its outcome. In other words, while Žižek uses the introduction to *The Parallax View* to bring sexuality into the realm of dialectical analysis in order to point toward the missing parallax objects of both, Reines takes that sex, that impossible relation, even love, further into Žižek's own theorizations by cutting the tags out and wearing them (weaving them) under her own literary skin.

Endnotes

1. Ariana Reines is the author of *The Cow* (Alberta Prize, FenceBooks 2006) and *Coeur de Lion* (Mal-O-Mar 2007). Two volumes of translation by Reines will appear in 2009: *My Heart Laid Bare* by Charles Baudelaire, for Mal-O-Mar, and *Carnet de bal d'une courtisane* by Griseldis Real, for Semiotext(e). She is under commission with The Foundry Theatre in New York for a play that will premiere in February 2009.
2. Under the discourse of 'Exuberance', Roland Barthes addresses the economics of love: "3. The lover's discourse is not lacking in calculations: I rationalize, I reason, sometimes I count, either to obtain certain satisfactions, to avoid certain injuries, or to represent inwardly to the other, in a wayward impulse, the wealth of ingenuity I lavish for nothing in his favor (to yield, to conceal, not to hurt, to divert, to convince, etc.). But these calculations are merely impatience's: no thought of a final gain: Expenditure is open, to infinity, strength drifts, without a goal (the loved object is not a goal: the loved object is an object-as-thing, not an object-as-term)." Yet precisely at the 'object-as-thing', Jacques Derrida's work in *Given Time: I. Counterfeit Money* looks to and questions gift (derived from Marcel Mauss' work) as nothing (among other things) if not the expectation and demand of repayment.
3. In a recent radio interview, Reines' work was introduced as an attempt to resuscitate the "I" of the American Poet. Whether art mirrors life, or life mirrors art, one of the many theoretical questions raised by *Coeur de Lion* is whether or not literature or poetry is scripted from or is always in the process of pre-scripting the course of courtly love.
4. Jacques Lacan is famous for, among other things, saying that "there is no sexual relationship." Slavoj Žižek writes on this at length in several of his books, emphasizing that this statement points not to the impossibility of sex, but to the gap between participants that leaves each party relating to themselves, and not the other involved in the act. If we take this as a stepping off point to discuss relationships textual as well as sexual, the project of writing is accordingly, auto-erogenous. And there would be no possibility for telling a complete story, encompassing all sides. This holistic possibility was unhinged before Lacan in Nietzsche's work as well.
5. See Woerner Hammacher's 2007 lectures, Saas Fee Switzerland, on Maurice Blanchot's work, *The Step Not Beyond*.
6. Reines, Ariana. *Coeur de Lion*. New York: Mal-O-Mar Press, 2008. pages unmarked.
7. Barthes, Roland. "A Lover's Discourse," trans. Richard Howard (New York: Hill and Wang, 1977). 98.
8. In *The Telephone Book*, Avital Ronell (University of Nebraska Press: Lincoln, 1989) explores the telephonic role of Martin Heidegger's relationship to and in language in order to explore the human relationship to and in language. Ronell writes: "The structure of saying exposes the human as only one of its properties, though not in a unique or even decisive way. Self-showing and telling cannot be claimed as trophies of the properly human. After marking the appearance of every kind and rank, Heidegger brings into view the simultaneousness of speaking and listening. Perhaps this supplies the transparency of context in which to circumscribe the kind of aggravated misreading that the science of schizophrenia presses upon Heidegger. This occurs precisely when it draws limits to its hopes for a decisively human property of self-showing. The question, as we saw it, concerned the presencing of the speaker, which appeared to be cut off from itself like an effect form a cause. 'Speaking must have speakers,' Heidegger shows, "but not merely in the same way as an effect must have a cause. Rather the speakers are present in the way of speaking. Speaking, they are present and together with those with whom they speak, in whose neighborhood they dwell because it is what happens to concern them at the moment' (W, 120)." pp 163 & 164.
9. Žižek, Slavoj. *The Parallax View* (Cambridge, MA: MIT Press, 2006), 212-213.
10. In a famous passage addressed by both Althusser and Butler, the criminal is the one who answers to the 'Hey you!' of a policeman's call – see "Ideology and Ideological State Apparatuses" by Louis Althusser and/or Judith Butler's *Psychic Life of Power*.
11. Žižek, Slavoj. *Parallax View*, 12 & 13.
12. As Derrida explicates in *Given Time: I. Counterfeit Money*, the conflation of author and narrator within a work of fiction can be its own form of counterfeiting and deceit. In Reines' work, the illusory and/or conflated "I" is what is worked and at work. As looking at this "I" in the formal and narrative problematics of *Coeur de Lion*, part of Reines' slippage is almost certain to slip into this analysis as well. And while apologies could be made, this author considers it part of the thrill of reading to work more than one angle, and more than one "I" at a time.
13. Reines, Ariana. *Coeur de Lion*, pages unmarked.
14. A potentially interesting example comes up in Louis Althusser's work entitled "Rousseau: the Social Contract" where he pinpoints the shift to passivity precisely: "What effects does Rousseau 'expect' from this falsified recourse. Or rather, to avoid the language of subjectivity, what effects necessarily call forth this recourse?" 132. Italics mine.
15. While Badiou never footnotes Heidegger, his use of the terminology of Being (Being and Time becomes Being and Event, etc...) is a clear, if unmarked citation, of this lineage.
16. Žižek, Slavoj. *The Parallax View*. 20
17. Žižek has been repeatedly cited for his attacks on deconstruction, which he aligns with liberalism.
- 18, 19, 20. Žižek, Slavoj. *The Parallax View*, 19, 17, and 21. [Brackets] mine.
- 21, 22. Reines, Ariana. *Coeur de Lion*, pages unmarked.

self-similarities

Mariana Ibanez and Simon Kim, IJK Studio



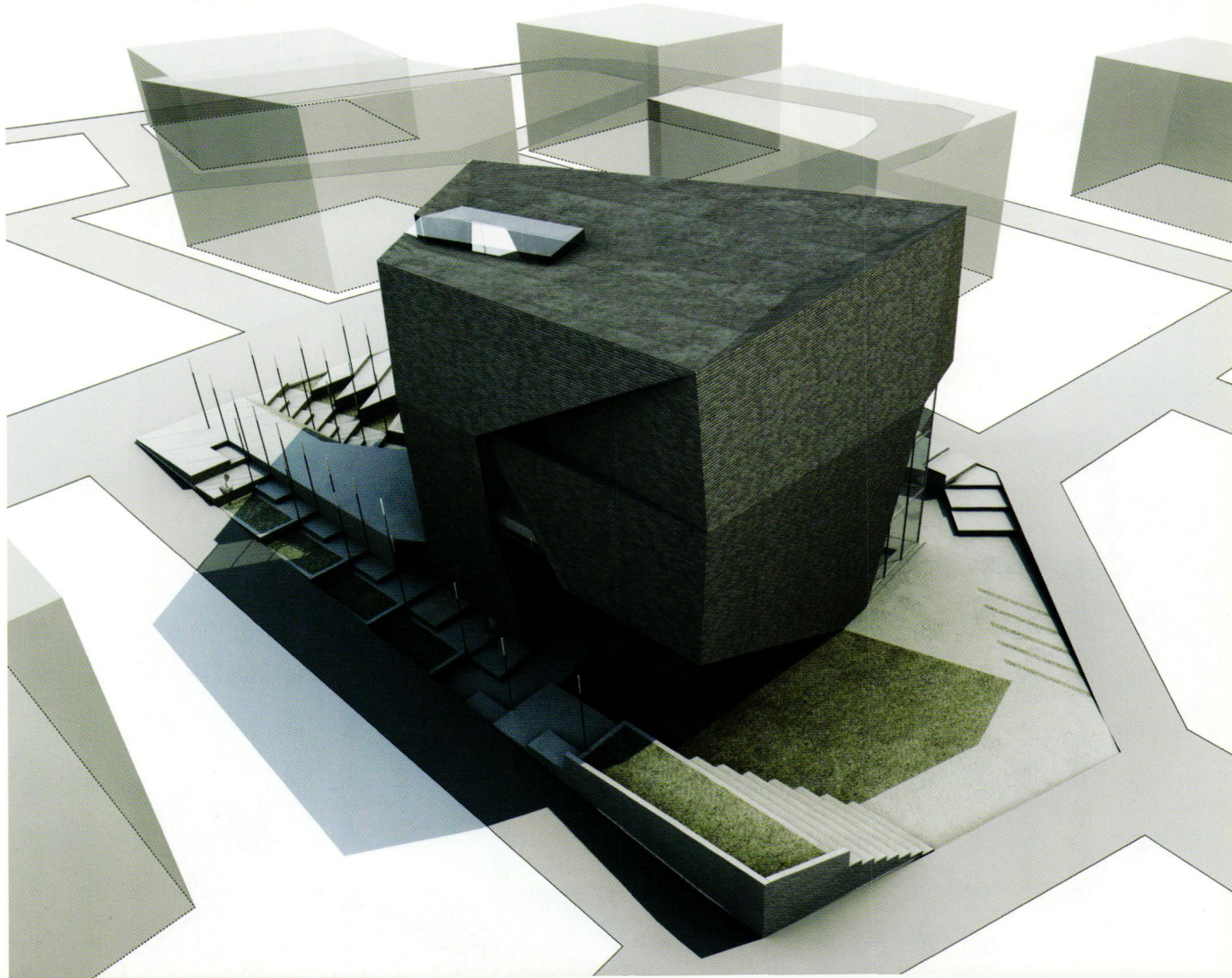
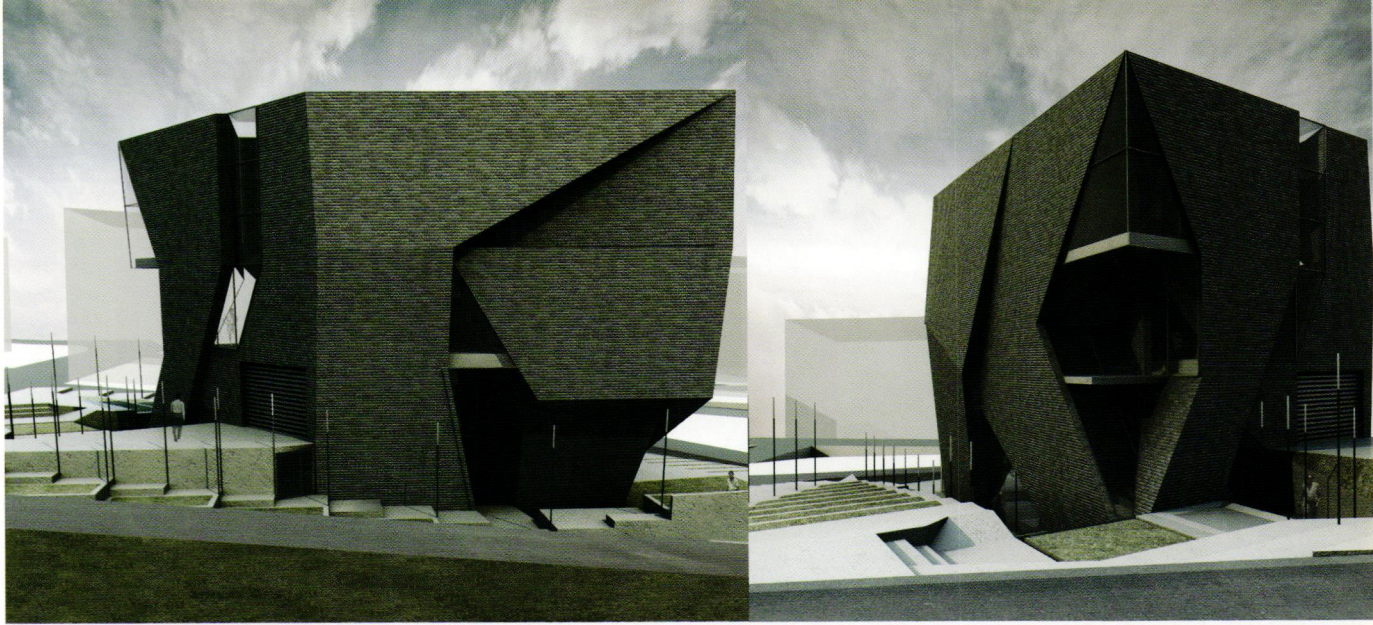
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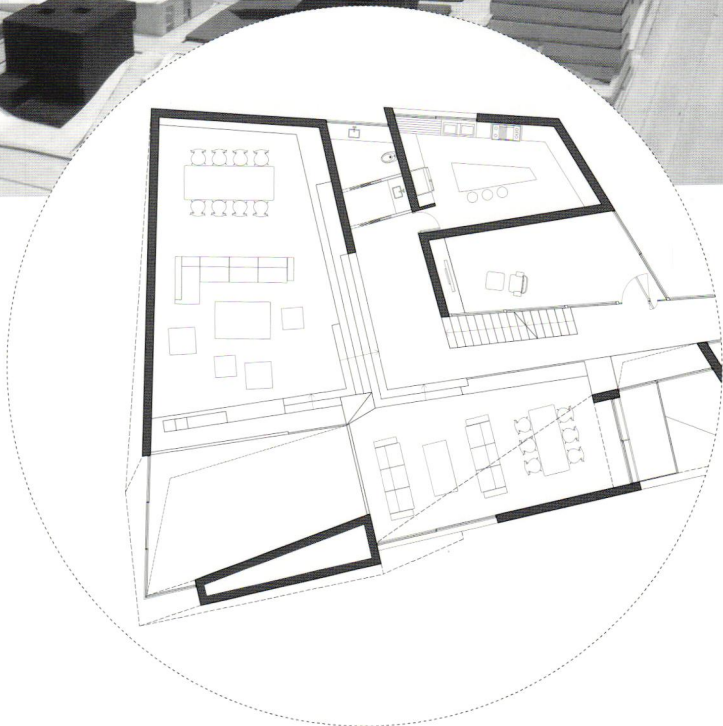
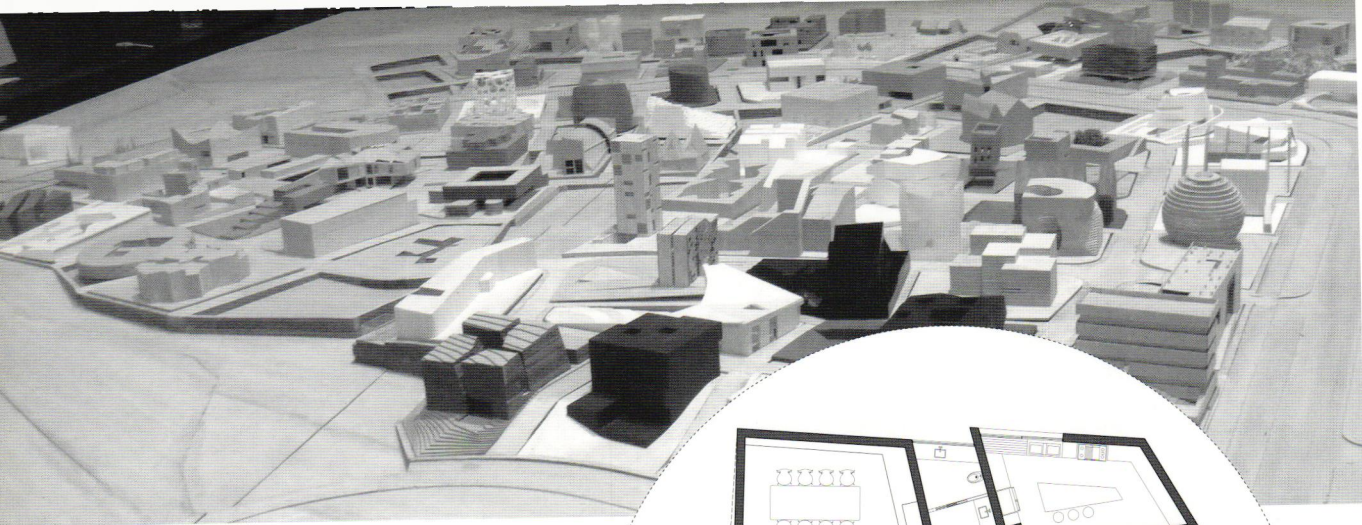
Q: *What is your attitude, as a western architect, towards the Ordos Project?*

A: *(pause)... units and identities.*¹

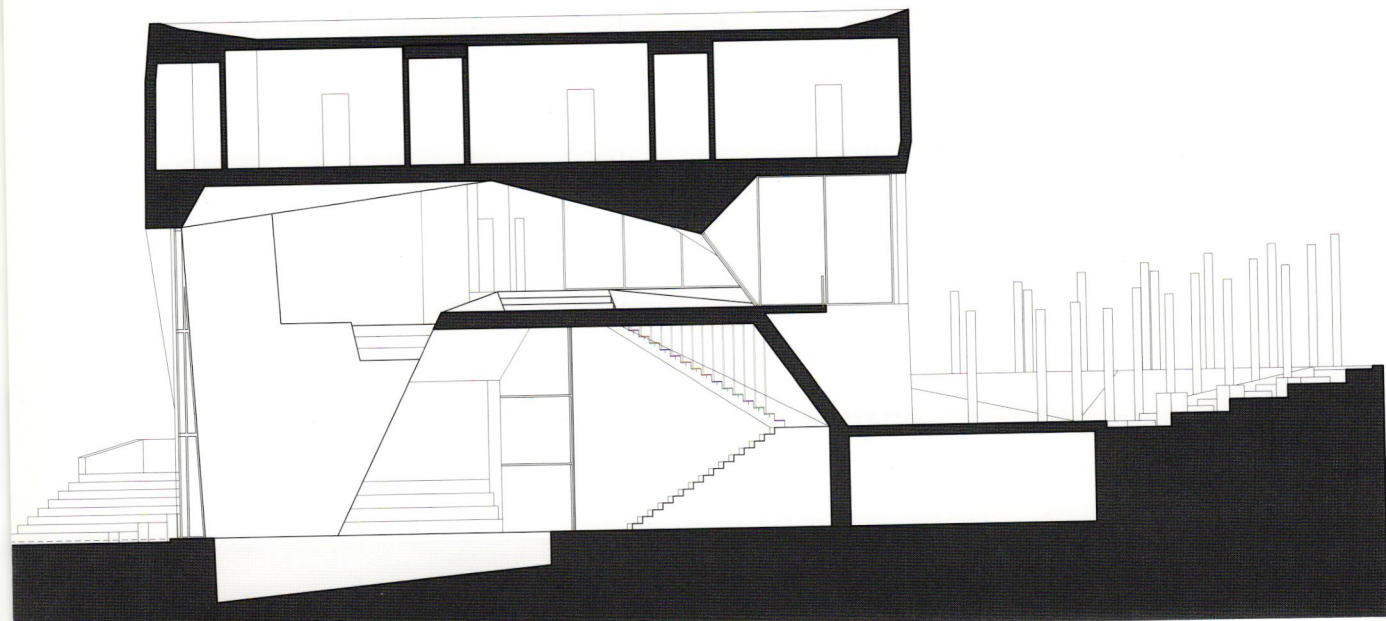
There is an interesting relevance in examining a one hundred-fold outcome that is controlled by self-similar criteria. One form of this is seen in a short-list competition from which a judging panel awards a hierarchy of prizes.² Each scheme contains a pretext of given conditions from which individuality is established and reinforced in order to gain the prize. The logical conclusion of this activity for the architect, given its extensibility, is to find or manufacture a *sui generis* from the field of contestants. This is a dual strategy, as the field is not known during the competition phase and thus every participant works in secrecy. Therefore any speculative attempts to expose and exploit a winning difference are through a clairvoyance, or the re-creation of all possible permutations in the work of the others. This imagined set of all possible combinatorics is then the field in which the competing architect may construct either the Counterpoint or the Unknown, and most likely some degree of both.³ The enquiry into the Unknown requires a process of discovery emerging from an active system. The Counterpoint involves the positioning or composing of countervailing fictions and interpretations of past instances: a rhetorical device.

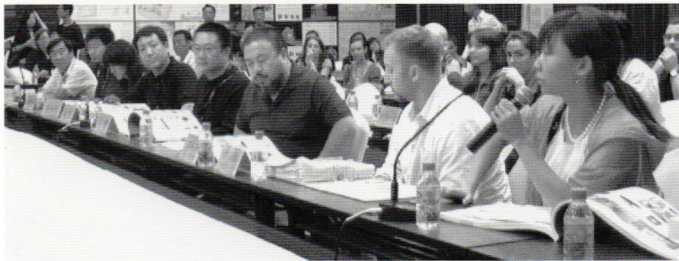
There is another method of producing the same stimulation of design anisotropy. This other format is the masterplan, as seen in the case of the Ordos 100 project, led by the artist Ai Wei Wei and his FAKE Design team, which commissioned one hundred emerging architecture firms to design one hundred discrete houses for a new town in Mongolia. The difference between the Ordos 100 project and a competition, of course, is that the entire field is to be constructed. This distinction requires the Unknown and the Counterpoint to be at work constantly, and not only at the single event of the competition. The field is exacerbated further by the lack of site conditions in which to respond. Because of the knowledge that every one of the seventy-two second-phase participants knows the name but not necessarily the work of the adjacent architect (as many of the one hundred were chosen for their potential, not their fame), the strategy of Counterpoint becomes increasingly tenuous. This requires a counterpoint not to the immediate group but to the field of architecture in general – but to what continent, or which polemic, or even which school? Concurrently, the designs of the twenty-eight first phase architects were available as references on a large masterplan model, with empty sites ready for the designs of the next phase. As any reference, these became primary notations in the Unknown and Counterpoint strategies.⁴





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Parcel 55: Site Topography

We were given this particular site from a lottery. With a grade change of four meters, parcel 55 is also in a dense location, with adjacent houses packed closely on all sides. The site and its steep terrain are managed through tracking walkways that then subdivide the site into best-fit terraced plates. The terraces are of sufficient dimension to allow for domestic functions. This operation allows for the subdivision of the overall site into an array of planes, each of which has specificity of occupancy.

House 4-2-1

FAKE Design provided a generic square outline as a recommended profile stacked with three floors; we maintained this area but introduced a slight rotation of the eastern edge to elongate the southern exposure. The primary house elements are composed in a movement of four terraces that follow a simple reversal of bifurcation. At the ground, there are four separate entrances to the distinct towers. As the towers climb, they join into two spaces: the major and minor living and dining rooms. At the top level, the towers unify into a single space of dwelling; all of the bedrooms and private spaces are located here.

The house that is produced by this system is interesting as its volumes are not easily perceived as domestic. However, the generated forms that emerge are regulated by profiles of interior spaces that are specifically dimensioned for their program and relations. As a *sui generis* condition, the bifurcations are a set of operations where the resultant is indeterminate, yet still predetermined in its overall range of limits.

The references and allusions from the site and context, as a counterpoint, have a didactic or narrative component. However, because the narrative or idea requires a form or container as an architectural expression, the house is a resultant of a portmanteau⁵ operation of domestic functionality overlaid with a model of bifurcation. As in the use of portmanteau by Lewis Carroll,⁶ ideas or words are not transformed but are superimposed to invent another, larger idea that contains the originals as well as the invention.

Endnotes

1. Excerpt from a videotaped interview by the Ordos Project team, June 2008. The following question replaced "Ordos" with "Inner Mongolia".
2. This difficulty grows by an order of magnitude when the other competitors are unknown, as short-list competitions frequently have historic frissons among well-established practices making predictions on the entries of the other.
3. There are certainly other strategies—we choose to differentiate these two as an operation or composition.
4. Faced with the simultaneity of individual work among a collective, the architects were apt to repeat the same behavior as in a design competition. While collaboration or at least communication among neighbors was initially discussed, most of the design work was shared instead among friends and colleagues.
5. Douglas R. Hofstadter, *Gödel, Escher, Bach: An Eternal Golden Braid*, "Chapter XII: Minds and Thoughts" (New York: Basic Books, 1980).
6. Lewis Carroll, *Through the Looking Glass* (1899). "Well, 'slithy' means 'lithe and slimy'... like a portmanteau - there are two meanings packed into one word."

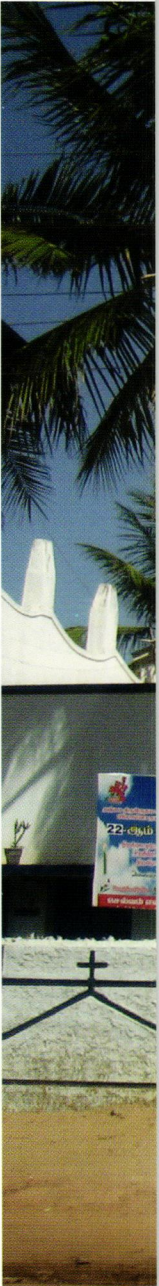
Roadside

Mark Jarzombek

02



Roadside Terragni





Roadside Venturi

“Signs of inhabitation”: The Critical Legacies of Patio and Pavilion

Nicola Pezolet

44

This essay is an investigation of the critical legacies of *Patio and Pavilion*.¹ Devised by Peter and Alison Smithson, along with their long-time collaborators Nigel Henderson and Eduardo Paolozzi (who were collectively known for the event as Group Six), this installation was presented at the *This is Tomorrow* exhibition, held at the Whitechapel Gallery in London in 1956. It featured a light architectural structure: the walls were made of second-hand wood slats and the roof of corrugated plastic (the pavilion). It is often described as a “shed”: one of the lateral sides is unenclosed, but was later barred off by the artists, who added tension wires across it [fig. 2]. Within the enclosure made of a series of semi-reflective aluminum panels in which the visitors could see themselves, a path connecting the two door openings was laid down on the floor (the patio). Once completed, the architects left the artists free to fill it with “signs of inhabitation”. The pavilion features a photomontage titled *Head of Man* by Henderson [fig. 1], as well as several objects either found or created by the two visual artists (bicycle wheels, decorated ceramics and boulders, a bugle, a revolver, a lobster picture, etc.). They also activated the floor: sand covered the entire surface, except for a patch that revealed another large collage by Henderson and different ornamented ceramics.

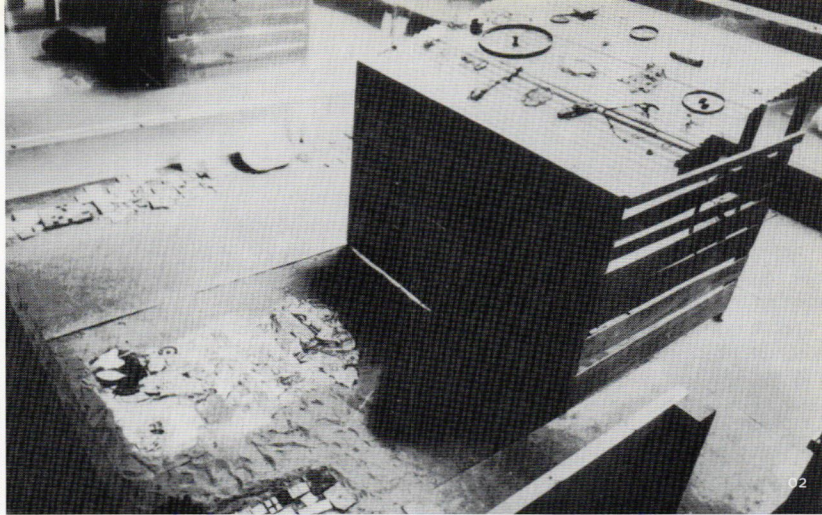
Patio and Pavilion was therefore designed in two phases: first the Smithsons erected the architecture, then Henderson and Paolozzi deployed the “signs of inhabitation”. The two approaches were fundamentally different from each other: such a way of working was a statement on the part of the group, who refused the idea of the “integration of the arts” promoted by the sympathizers of the neo-Constructivist *Groupe Espace* (some of whom were also present in the *This is Tomorrow* exhibition). The Smithsons created the contained structure, and then left London to attend the tenth meeting of the *Congrès Internationaux d’Architecture Moderne* (CIAM) in Dubrovnik, showing no indications as to what the artists should do, or how they should do it. P. Smithson said retrospectively that upon their return to England, “they were knocked down” by what Henderson and Paolozzi had done with their architectural structure.² When they rediscovered *Patio and Pavilion*,

the Smithsons – who fashioned themselves as promoters of an accommodating type of modernism which they would later dub as being “without rhetoric” – did not dismiss or reject it, but chose to “dehistoricize” it, to turn it into an archetype, a

symbolic Habitat, in which are found in some form or other the basic human needs. The architect’s work of providing a context for the individual to realize himself in, and the artist’s work of giving signs and images to the stages of this realization, meet in a single act, full of inconsistencies and apparent irrelevances of every moment, but full of life.³

This kind of general statement left a lot of space for third parties to speculate about what that “symbolic Habitat” could mean. The “operative critic” Reyner Banham,⁴ a close friend of the members of Group Six and an avid promoter of the Smithsons, was eager to claim *Patio and Pavilion* as a New Brutalist project,⁵ but he virulently criticized it as too “traditional”.⁶ In the first article titled “This is Tomorrow” published in *Architectural Review*, Banham declared that *Patio and Pavilion* “showed the New Brutalists at their most submissive to traditional values”.⁷ Similarly, in the “Brute, non and other art” section of the conclusive monograph *The New Brutalism* published in 1966, Banham writes:

Their ‘Patio and Pavilion’ (...) exhibited an architectural form that would be described nowadays by critics like Vincent Scully as “essentially a megaron in a temenos-enclosure” and was described by the group themselves in the exhibition catalogue in terms of “...necessities of human habitat... the first necessity is for a piece of the world, the patio. The second necessity is for an enclosed space, the pavilion.” Such an appeal to fundamentals in architecture nearly always contains an appeal to tradition and the past – and in this case the historicizing tendency was underlined by the way in which the innumerable symbolic objects... were laid out in beds of sand in a man-



Nigel Henderson, views of Patio and Pavilion, Whitechapel Gallery, London, 1956.

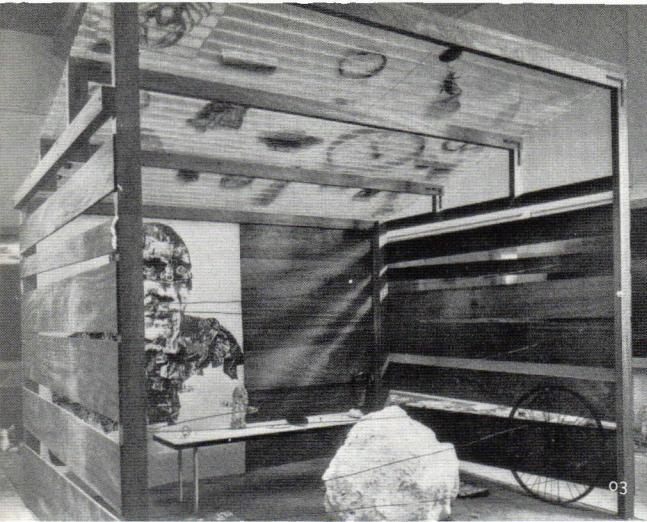
ner reminiscent of photographs of archeological sites with the finds laid out for display. One or two discerning critics... described the exhibit as “the garden shed” aesthetic but one could not help feeling that this particular garden shed... had been excavated after the atomic holocaust, and discovered to be part of European tradition of site planning that went back to archaic Greece and beyond.⁸

This short passage contains two key ideas on which later historians and critics will expand: (a) *Patio and Pavilion* is “informal” and “primitive” and (b) it is a derelict form of “bombsite architecture” that captures the anxious *Zeitgeist* of the atomic age. Indeed, Banham’s idiosyncratic take on the project, which elides the differences between the work of the artists and the architects, became the “hard core” of practically all the research programs that came after it. Take, for example, the widely read chapter “New Brutalism and the Architecture of the Welfare State: England, 1949-59” in the second edition of Kenneth Frampton’s *Modern Architecture: A Critical History*. He states that the project is an “ironic reinterpretation of Laugier’s primitive hut of 1753 in terms of the back-yard reality of Bethnal Green” but also suggests that “this gesture was by no means entirely retrospective, for within this cryptic and almost casual metaphor of the shed the distant past and the immediate future fused into one. Thus the pavilion patio was furnished not only with an old-wheel and a toy aeroplane but also a television set. In brief, within a decayed and ravaged (i.e. bombed out) urban fabric, the ‘affluence’ of a mobile consumerism was already being envisaged, and moreover welcomed, as the life substance of a new industrial vernacular.”⁹

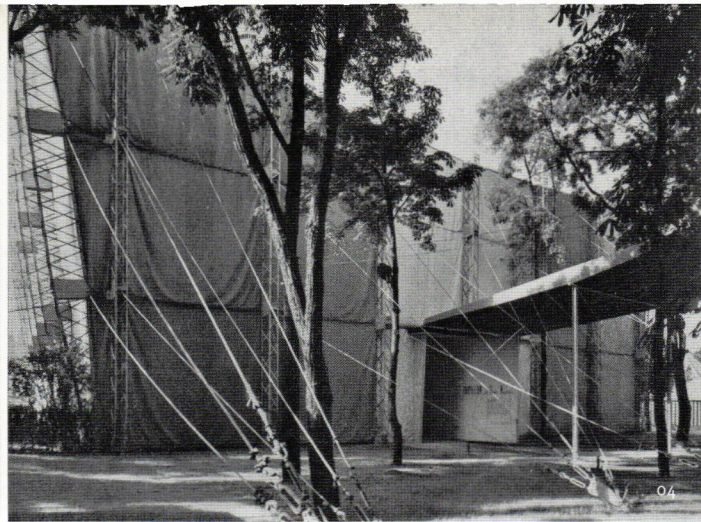
Frampton’s short interpretation, with its numerous projections, is a classic example – to use an expression by Umberto Eco – of an interpretative “drift”.¹⁰ *Patio and Pavilion* never featured a television set or a toy aeroplane,¹¹ which therefore renders his interpretation of the project as a traumatic afterthought on war and a casual celebration of consumerism rather unconvincing. As for the “shed”, often compared

to Henderson’s potting shed behind his residence in Bethnal Green (the neighborhood where the Whitechapel Gallery was actually located), it does feature decorated ceramics, but hardly any objects or tools that are distinctively “working class”. More recently, the media critic Ben Highmore, following up on these precedents, describes *Patio and Pavilion* as “clumsy, bombsite architecture”, as a “reminder of death and destruction” in “a period all too ready to embrace the amnesia of the spectacle”.¹² Of course, all of these points suggest something extremely interesting about the external cultural contexts out of which these historians and critics evolved (the Cold War for Banham and Frampton, and the so-called “war on terror” for Highmore), as well as the various competing theoretical trends of different decades. But to paraphrase Eco again, the work’s internal coherency, albeit elusive, determines the legitimacy of a particular response; an interpretation that does not respect this irreducible aspect of the work is a *use* of that work rather than an *interpretation*. This is not an attempt to restrict ourselves to one right meaning – but at this point, we should check the main hypotheses at hand against the rest of the work itself.

First of all, is *Patio and Pavilion* “bombsite architecture”? This persistently held assumption seems difficult to accept, as the structure features no real signs of destruction. In fact, it stands out for the newness of its architectural materiality (especially the use of reflective aluminum panels and of corrugated plastic, two popular industrial materials in the 1950s). The wood panels, that are apparently second hand, are not burned out, shattered or even dirty. As for the “homely junk”, most of it is clustered together with care around the path laid out for the visitors, which suggests the display was very consciously arranged and not meant to resemble the result of an explosion, let alone a nuclear blast. As for Henderson’s *Head of Man*, a photomontage/collage made of outmoded images from catalogues, encyclopedias and natural history books (such as Diderot and D’Alembert’s *Encyclopédie* – and not from contemporary commercial advertising, as in the case of the other Pop Art installations, which sported a dizzying array of image from science-fiction), if it indeed could read as a fragmented and burned out corpse



Patio and Pavilion, front view (P. and A. Smithson)



Le Corbusier, *Pavillon des Temps Nouveaux*, Paris, 1937

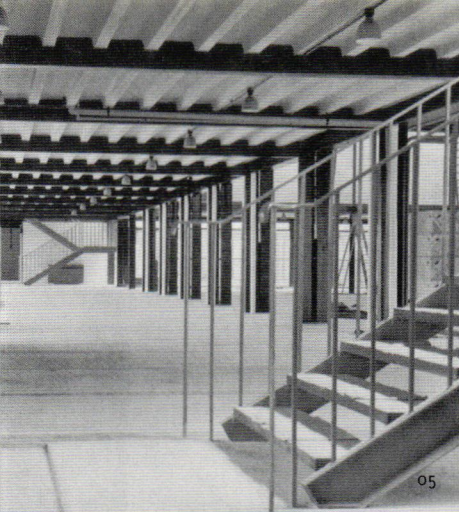
46 with cratered surfaces (an interpretation even more poignant when we consider that Henderson worked on bomber planes during World War II), it could just as well be interpreted as a vitalist figure representing “regeneration through the cycle of decay and rebirth”¹³ (especially in light of the other collage in the small gallery space, which represents plant growths and a sort of pond in which various life forms are juxtaposed to an excavated figure from Pompeii). As claimed by the art historian Victoria Walsh, Henderson – who was very familiar with the collages of Max Ernst, for example – was “true to the surrealist aesthetic, which embraced ideas of ambiguity and metamorphosis”.¹⁴ Indeed, Henderson, in a letter to Chris Mullen, confirms that *Head of Man* was inspired by the heads of Archimboldo “and those composites the surrealists liked made of intertwined nudes.”¹⁵ Similarly, we should understand Henderson’s seemingly random display of objects on the corrugated plastic roof as a formal strategy inspired by his photographic experiments, in particular his *Hendograms* (a moniker that he chose for his photograms that are directly inspired by Man Ray’s *Rayograms*, who hoped to illustrate through photography the Surrealist concept of “hasard objectif”).¹⁶

The second question we must address is regarding the question of “informality”. Highmore describes the Pavilion as a type of “‘make-do and mend’ architecture, something slung together by someone lacking much proficiency in carpentry, let alone architecture”. Is it so? Should we pay close attention to the design of the work, as well as some specific details of the built version, the answer is no. In the only perspectival drawing produced by the Smithsons, the lines are assured, measured and precise [fig. 7]. Secondly, if we look closely at the wood slats on both sides of the Pavilion, we see that they are not “irregularly nailed planks of wood”¹⁷ – they are purposively arranged with great attention, probably to create visual effects of light and shadow on the back wall of the Pavilion [fig. 3]. Even when they are oriented slightly diagonally and with interval between them, the wood slats on each side are perfectly symmetrical to each other (as they are on the projective drawing). Also, the various metal brackets connected to the wood structure that

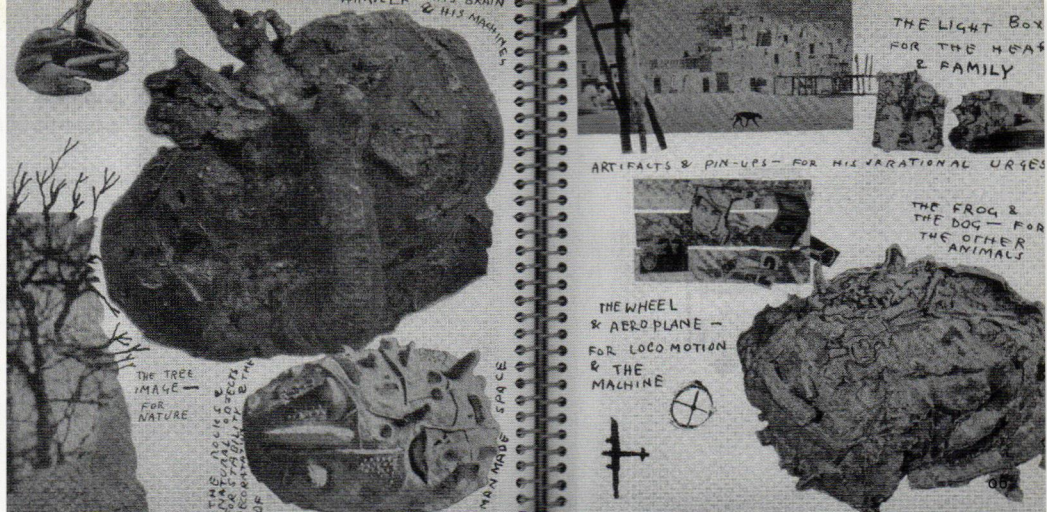
supports the roof are exposed so as to show the exact way the entire thing was assembled – if it was “informal architecture”, then the creator would not have paid so much attention to structural and tectonic details, but would just have thrown materials together haphazardly. In that regard, the pictures of *Patio and Pavilion* taken by the Smithsons actually bear some similarities to the published pictures of the empty Hunstanton school [fig. 5], which, as noted by the architectural historian Laurent J. Stalder, strongly emphasize the “honesty” of materials and the rawness of the individual building components as ways to breach the Miesian formalist canon and also in order to promote an “aesthetic of change”.¹⁸

Bearing these various points in mind, it is pertinent to open up new possibilities to interpret *Patio and Pavilion* with fresh appreciative insight. It seems particularly interesting to further explore the nature of the collaboration between the Smithsons, on the one hand, and Paolozzi and Henderson, on the other. Indeed, if both parties rejected the Constructivist idea of an “integration of the arts”, their way of working was particularly at odds with each other. In this particular project, the Smithsons seem willing to further promote their “aesthetic of change” – one they developed with other projects like Hunstanton. With this concept, “the Smithsons had defined an architectural, and in the best sense of the word, aesthetic principle that not only had to be able to incorporate structural changes, but was supposed to imply them as well.”¹⁹ Instead of opting for formal unity, the Smithsons instead focus on the use of materials in order to support their ideas of expandability, transience and mobility. Not only could a structure like the one seen in *Patio and Pavilion* serve different functions – it could also be assembled quickly, just as well as it could be deconstructed and moved around to meet the basic needs of its users.

The choice to call it a “pavilion” also shows a willingness on the part of the architects to situate this project, albeit critically, within a whole trajectory of modernist pavilions, such as the 1929 *Barcelona Pavilion* by Mies van der Rohe and the 1937 *Pavilion des Temps Nouveaux*



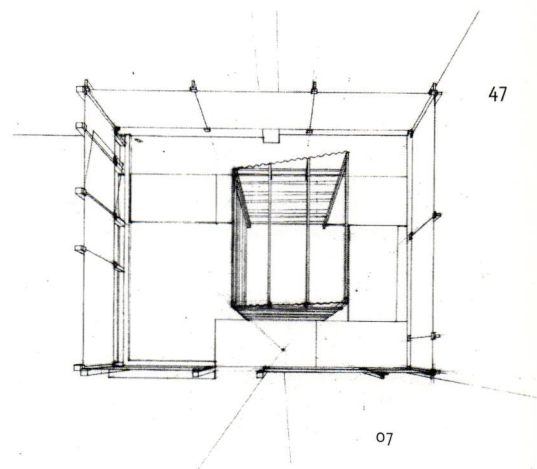
Hunstanton Secondary Modern School, Norfolk, 1954 (P. and A. Smithson)



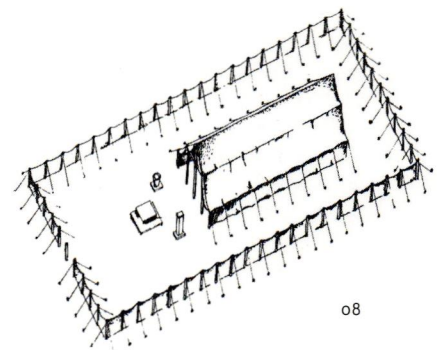
Catalogue entry for *Patio and Pavilion* and the *This is Tomorrow* catalogue, 1956

by Le Corbusier. But whereas Mies chose to add a classic nude sculpture by Georg Kolbe and to use permanent materials (steel, glass, marble, and travertine) for his impermanent exhibition in order to elevate his pavilion from mere construction to “building art” (*Baukunst*), the Smithsons chose to work with highly portable and expendable materials in a way not so dissimilar to what Le Corbusier did with his transient *Pavilion des Temps Nouveaux* [fig. 4]. It could be interesting to consider the connections between *Patio and Pavilion* and this mostly overlooked project of Corbu: the title echoes that of the exhibition they were a part of (it translates in English to “the pavilion of the new era”, which is very close to *This is Tomorrow*), and its innovative tent-like structure (based on his drawing of a “primitive temple”) could very well have been appealing to the architects. Such an approach would indeed allow to clarify and to substantiate the issue of *Patio and Pavilion*’s relationship to the “primitive” and also the Smithsons’ ambiguous staging of a future that more or less looks like the past (or that, at least, does not look “futuristic”, like the *House of the Future*, presented a few months earlier at the *Daily Mail Ideal Home Exhibition*). If it does deal with the theme of architectural “primitivism”, it seems to be mediated through this particular drawing and pavilion (and not Laugier, nor Semper). First published in *L’Esprit Nouveau* and then re-printed in *Vers une Architecture*, Le Corbusier’s rendering of a “primitive temple” indeed shares some similarities to the Smithson’s own drawing of *Patio and Pavilion*: the open façade in front of which ritual objects are to be displayed and also the rectangular shape of the enclosure [fig. 8]. However, despite some of these similarities, the Smithson’s project rejects the claims made by Le Corbusier, who uses this drawing to re-assert his conviction that “geometry is the language of man”. Instead of geometry, change and mobility seem to be the key ideas defended by the Smithsons.

Henderson and Paolozzi, on the other hand, were little concerned with these architectural issues and seemed more willing to use art and “found objects” to describe that which lies outside of the construction logic of modernist architecture. Indeed, their “signs of inhabitation” offer a process of representing spatial experience as radically subjective. Inspired, at least to some extent, by the Surrealist collages of Max Ernst, in which strange creatures invade living rooms and streets, they subvert the exemplary tectonic structure into an unstable and uncanny space. Objects take an unpredictable life of their own: as the hand-written catalogue entry for *Patio and Pavilion* mentions, the “artifacts” and “pin-ups” are there for man’s “irrational urges”. By quoting the Surrealist leader André Breton’s text on Max Ernst, we could very well describe Henderson and Paolozzi’s use of objects as cues to disrupt the normativity of everyday perception through,



P. and A. Smithson, perspective view of *Patio and Pavilion* (coll. P. and A. Smithson, Harvard GSD)



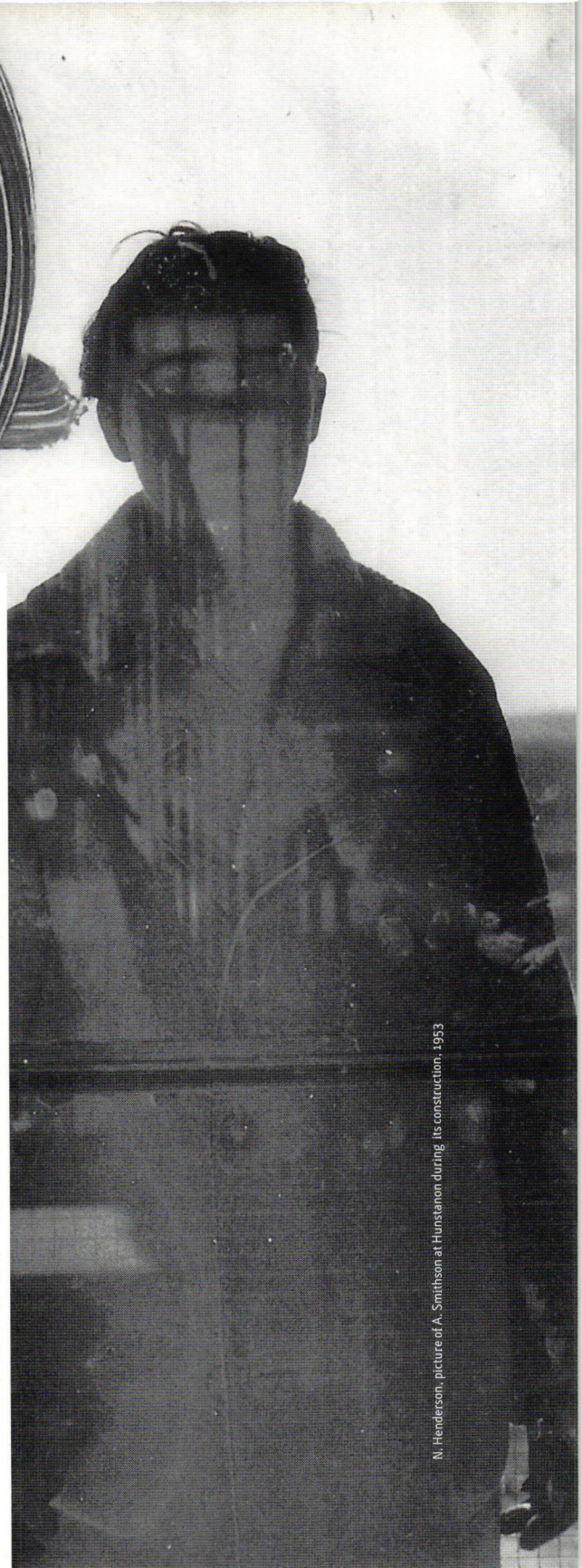
Le Corbusier, drawing of a “primitive temple” in *Vers une Architecture*, 1923



the marvelous power to bring together, without leaving the field of our experience, two distant realities and from their reconciliation to draw a spark; to put within the grasp of our senses abstract figures endowed with the same intensity, the same relief as the others; and, by depriving us of our frames of reference, to disorient us within our memories.²⁰

The artists' intervention, then, is not only about "giving signs and images to the stages" of the individual's "realization", but also about giving free rein to what has been repressed by the discipline of architecture. This should not be understood as a reactionary and nostalgic dismissal of modern architecture altogether – much like the Surrealists before them, the artists indeed try to position themselves as the necessary counterpart to such functionalism. As Hal Foster has polemically argued, "Surrealism is about *desire*: in order to allow it back into architecture it fixes on the outmoded and the ornamental, the very forms tabooed in such functionalism, associated as they became not only with the historical and the fantastic, but with the infantile and the feminine."²¹

A photograph by Henderson seems to foreshadow Henderson's *Head of Man* [fig. 9]. Posing behind a shatter-proof glass, A. Smithson stands pensively next to a graffiti that represents a grotesque smiling head, one that would have horrified the modernist forerunner Adolf Loos, who literally "criminalized" these types of "primitive" markings.²² The head is there as a friendly but unsettling reminder that functional architecture, no matter how accommodating it aspires to be, is always about ordering and disciplining the subject (of its mind, of its body). The uncanny disruption of Henderson's *Head of Man* amidst *Patio and Pavilion* also registers other repressed contents: the trauma of war and the destruction of nature is but one possible meaning. At the same time, the *Head* and the other collages representing animals and natural formations could just as well be seen as attempts by the artists to reconnect the subject with that which is not addressed by the architects. This open-ended view of modern architecture which is made possible not by direct collaboration between the artists and the architects, but by a series of miscommunications that created a breach into disciplinary boundaries, is just what make *Patio and Pavilion* so different, so appealing.



1. I wish to thank my advisors, professors Caroline A. Jones and Mark Jarzombek (*History, Theory and Criticism of Art and Architecture*, MIT, Cambridge), as well as professor Laurent J. Stalder (*Geschichte und Theorie der Architektur*, ETH, Zürich), who greatly contributed to the completion of this essay. I also wish to thank the student organizers of the conference *Research in Progress 2008* ("What Object?") at MIT for allowing me to present a preliminary version of this paper. Finally, a special thank you goes to Inés Zaldueño and the archivists of the Special Collections of the Frances Loeb Library at Harvard University.
2. P. Smithson quoted in: J. Millar, "This is Tomorrow," *The Whitechapel Art Gallery Centenary Review* (London: Whitechapel Gallery 2001), 70.
3. A. and P. Smithson, "The Smithsons," (1956) in: *Changing the Art of Inhabitation* (London: Artemis, 1994), 109. As for their collaboration with Henderson and Paolozzi, P. Smithson looked back at it simply as "a celebration of friendship". See P. Smithson (1979) quoted in: Victoria Walsh, *Nigel Henderson: Parallels of Life and Art* (London: Thames and Hudson, 2001), 119.
4. I here use the famous expression by Manfredo Tafuri. In *Teorie e Storia dell'Architettura* (Bari: Laterza, 1968), he warned readers against "operative criticism", defined as "an analysis of architecture...that has at its objective the planning of a precise poetical tendency, anticipated in its structure and derived from historical analyses programmatically distorted and finalized."
5. There is technically no "Brutalist manifesto", but it is generally considered to be Banham's "The New Brutalism," *The Architectural Review*, vol. 118 (December 1955), 354-361. His three specific "criteria" for Brutalist architecture were "memorability as image," "clear exhibition of structure" and "valuation of materials 'as found'".
6. New Brutalism was always an elusive category to begin with, as noted by Laurent J. Stalder. Because of "the many definitions of New Brutalism that the various protagonists published in different interpretations, pinning down the notion has remained as difficult as finding a systematic exposition of New Brutalism in the contemporary writings that could provide the basis for a comprehensive and coherent theory," Laurent J. Stalder, "What's New About New Brutalism? Hunstanton School and Architecture as 'Image,'" unpublished manuscript of presentation at the *Society of Architectural Historians* annual meeting (2005, Vancouver), 1; subsequently republished as Stalder, "New Brutalism", "Topology" and "Image": some remarks on the architectural debates in England around 1950," *The Journal of Architecture*, vol. 13, no. 3 (2008), 263-281.
7. Banham, "This is Tomorrow," *Architectural Review*, vol. 20 (1956), 187. Banham's highly problematic notion of "tradition", at that time, was criticized by Professor Stanford Anderson. Anderson's Popperian critique, which is mostly overlooked in contemporary appraisal of Banham's work – such as Nigel Whiteley, *Reyner Banham: Historian of the Immediate Future* (Cambridge, Ma: MIT Press, 2002) – still offers extremely useful cues to unpack some of the problematic aspect of his technophile historiography. See Stanford Anderson, "Architecture and Tradition That Isn't 'Trad Dad'," *Architectural Association Journal*, vol. 80, no. 892 (May 1965), 325-331.
8. Banham, *The New Brutalism*, 64-65. This passage does not contain footnotes referring to Scully's work, nor does it refer to the "discerning critics" (perhaps from the *Birmingham Gazette*?)
9. Kenneth Frampton, *Modern Architecture: A Critical History (second edition)* (London: Thames and Hudson, 1985), 265.
10. Umberto Eco, *The Limits of Interpretation* (Bloomington, Ind.: Indiana University Press, 1990).
11. The built version of *Patio and Pavilion* indeed does not contain a toy aeroplane, although a drawn outline of a plane appears in the entry for the *This is Tomorrow* exhibition catalogue, with the caption "the wheel & aeroplane for locomotion & the machine" [fig.6]. Although the drawing is evocative of a plane used during World War II (it seems to be a stylized version of a De Havilland Mosquito, one of the most famous British planes and one that fascinated people like Theo Crosby and Reyner Banham), it could just as well be meant to represent a civilian airplane (as many of these planes were being converted as civilian aircrafts after the war). I wish to thank my colleague Enrique Ramirez (School of Architecture, Princeton University) for his generous insights on this matter.
12. Ben Highmore, "Rough Poetry: Patio and Pavilion Revisited," *Oxford Art Journal*, vol. 29, no. 2 (2006), 290. This is the only comprehensive article – and by far the best argued – on *Patio and Pavilion*. Although Highmore does not reference Guy Debord, his conclusion is clearly an allusion to *La Société du Spectacle* ("The Society of the Spectacle", 1967), which holds that "the spectacle" (in other words, capitalist commodity fetishism) "considered as the reigning society's method for paralyzing history and memory and for suppressing any history based on historical time, represents a false consciousness of time." The emphasis is in the original. English translation online: <http://www.bopsecrets.org/SI/debord/>
13. Walsh, *Nigel Henderson: Parallel of Life and Art*, op. cit., 118. It is, however, dubious to call it a "modern Frankenstein" as did the authors of *Art Since 1900* (London: Thames and Hudson, 2004), 388 – *Head of Man* features no mechanical elements, contrary to Paolozzi's *Automobile Head* of 1954.
14. Walsh, op. cit.
15. Nigel Henderson, undated letter to Chris Mullen, quoted in Walsh, *Nigel Henderson*, op. cit., 118. The Surrealists were also very interested in the work of Archibaldo, whom they claimed (along with the work of visionary artists like Bosch, Dürer and Grünewald) as historical precedents to Surrealism. See, for instance, a book published during that period: André Breton, *L'Art Magique* (Paris: Phébus, 2003 [1957]).
16. While it is difficult to know the specific significance these objects had to the artists, it is tempting to perceive not so much allusions to war (as Highmore has it) but rather subtle allusions to the work of artists close to Surrealism, in particular to Duchamp's readymade (*Bicycle Wheel*, 1913) and to Dalí's delirious surrealist objects (*Lobster Telephone*, 1936).
17. Sarah Williams Goldhagen, "Freedom's Domicile," in: *Anxious Modernisms: Experimentation in Postwar Architectural Culture* (Cambridge, Ma.: MIT Press, 2001), 75.
18. Stalder, "What's New About New Brutalism?," loc. cit., 3. For the "aesthetic of change", see: Smithsons, "The Aesthetic of Change," *Ordinariness and Light: Urban Theories 1952-60 and Their Application in a Building Project 1963-70* (Cambridge, Ma.: MIT Press, 1970). It is important to mention that the Smithsons, when *Patio and Pavilion* was rebuilt in the United States in 1990, gave the project yet another life by reframing it as the counterpart to the Pavilions of their "architectural grandparents" (namely Le Corbusier and Mies) which, in their opinion, "belong to a world innocent of machines and technology". Their own project, however, was supposedly meant "to protect the occupants and position them so they can appreciate the seasons, enjoy quiet and feel protected". Not "bombsite architecture" but "light-touch" inhabitation and St. Jerome in the desert! See: P. and A. Smithson, "The Nature of Retreat," *Places: A Quarterly Journal of Environmental Design*, vol. 7, no. 3 (1991), 10. See also: Peter and Alison Smithson, "'Patio and Pavilion' Reconstructed," *AA Files*, no. 47 (2002), 37-44.
19. Stalder, "What's New About New Brutalism?," loc. cit., 3.
20. André Breton (1921) quoted in: Gavin Parkinson, *Surrealism, Art and Modern Science* (New Haven: Yale University Press, 2008), 56.
21. Hal Foster, *Compulsive Beauty* (Cambridge, Ma.: MIT Press, 1993): 190. Emphasis in the original.
22. See: Adolf Loos, "Ornament and crime," (1908) in: Ulrich Conrads (ed.), *Programs and manifestoes on 20th-century architecture* (Cambridge, Ma.: MIT Press, 1991 [1970]), 19-24. The Smithsons also despised graffiti: according to Mark Jarzombek, during one of their conferences at MIT, the Smithsons described it as a manifestation and as a consequence of a misalignment between society and art. This point deserves further inquiry.

Image Credits: Figs. 1, 2, and 9 courtesy of the Nigel Henderson Estate. Figs. 3, 5, 7 courtesy of the Peter and Alison Smithson Estate and the Frances Loeb Library, Harvard Graduate School of Design. Figs. 4 and 8 courtesy of the Fondation Le Corbusier. Fig. 6 reprinted from the *This is Tomorrow* catalog.

The Big Displacement: Public Works as Public Space

J. Meejin Yoon and Meredith Miller

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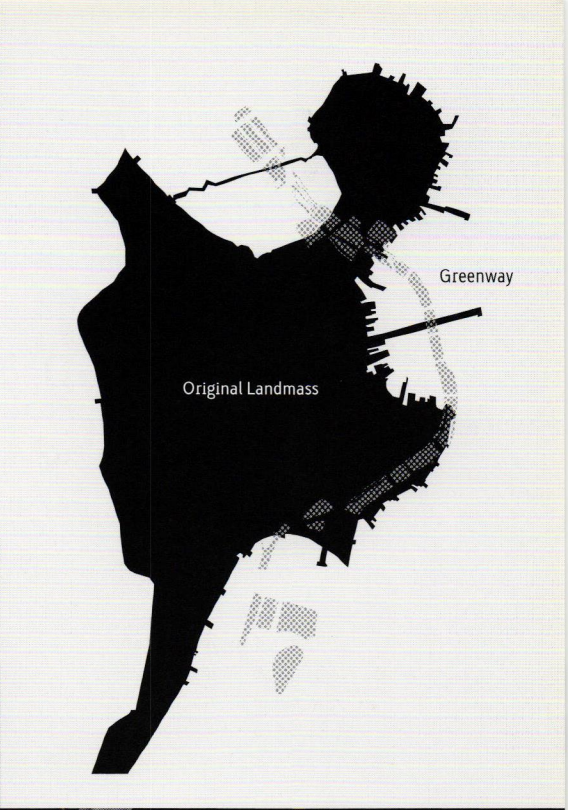
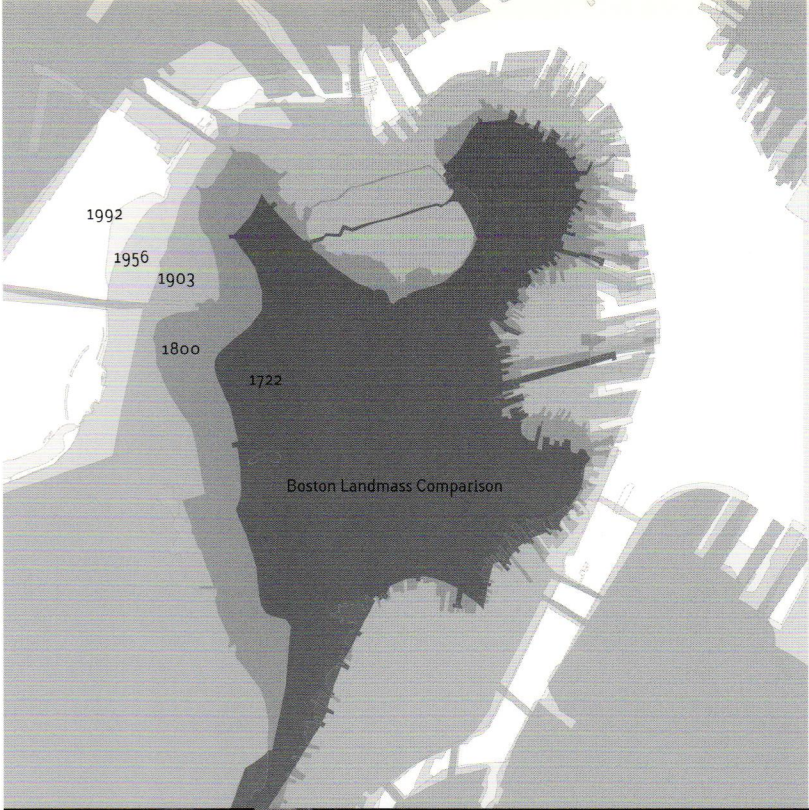
Nearly fifty years after its remarkable incarnation in downtown Boston, the raised highway nicknamed the Green Monster met its end, to the delight of its many detractors. With north- and south-bound traffic now pumping through a network of underground roadways and the vestigial structure removed part by green-painted part, the interstate has been essentially erased from view; in its place, a series of parcels designated for park space emerged to constitute the Rose Kennedy “Greenway”.

Adding 27 acres of open space to the city, the Greenway arrived on the heels of a decade-long construction process popularly known as the Big Dig. This famously troubled works project inflicted a seemingly endless headache of excavation and construction—and left behind a tidy image of greened park-space at the site of impact. Applied like a green salve to the six-lane gash that divided the city, the linear park promised an improved public realm as payback for the poorly realized ambitions of 1960’s highwayification. The resulting swath of open space, however, retains the memory of the old Artery through its singular figure; while no longer a physical barrier, the resulting “urban void” rearticulates the zone of separation between adjacent neighborhoods.

The raised Central Artery was such a conspicuous presence in the city that one can argue that its removal generated an afterimage; an optical mistranslation, an afterimage occurs when the brain sees the negative of an image recorded by the eyes after the actual image shifts out of view. The park that replaced the dismantled highway is a linear figure of comparable substance against the background of the city, occupying the same highly contested and historically fraught real estate in downtown Boston. A repressed element from the city’s recent past, the Green Monster remains like an imprint on the surface of the urban ground, an after-image involuntarily reproduced until it eventually fades as perception catches up with reality.

The Big Dig can thus be understood as a transfigurative process, whereby one object of public value, the raised highway, is substituted with another currency. But now that the construction fences have come down, the results of the decade-long transformation resist the tidy evaluations of before-and-afters: after all of the expenditure, after all of the enormous effort, the result is emptiness.

While open space is a critical ingredient in the production of a public realm, there is a vivid contrast between the complexity of the Big Dig as an infrastructural project and the seeming simplicity of neutral open space as the unassailable answer to the Artery’s afterlife. Even the phrasing “open space” suggests itself not as a fully-formed idea but as an indeterminacy or absence, a negative space framed within a more resolved context. The complexity of this project came at no small cost, both in a monetary sense but also in less quantifiable ways, such as the inconvenience and anxiety of a city undergoing massive reconstruction. If this public works

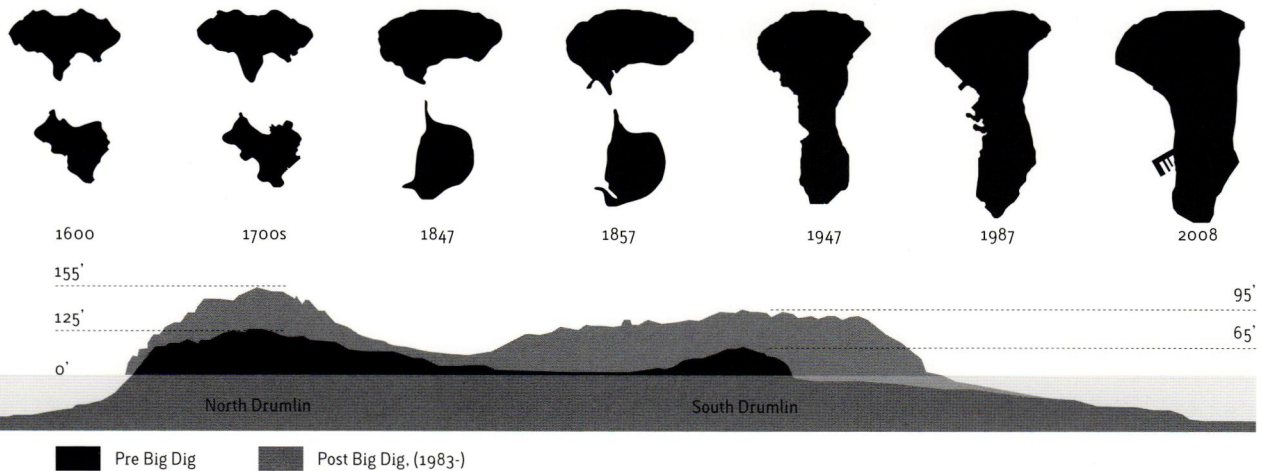




View of Spectacle Island from tower in Downtown Boston



View of Greenway and northern entrance to the Central Artery Tunnel



project impacted the city not only through an overhaul of its transportation core but also through the amplification of its public realm, an evaluation of its actual effects cannot be solely quantitative. Measuring the impact of the Big Dig on the urban landscape necessitates other metrics to account for both ends of the project: public space weighed against public works.

But the bulk of the newly formed public park space is actually found a few miles from the site of construction, at one of many sites in the region that received the material byproducts from the tunnel excavation as well as the Artery's demolition.

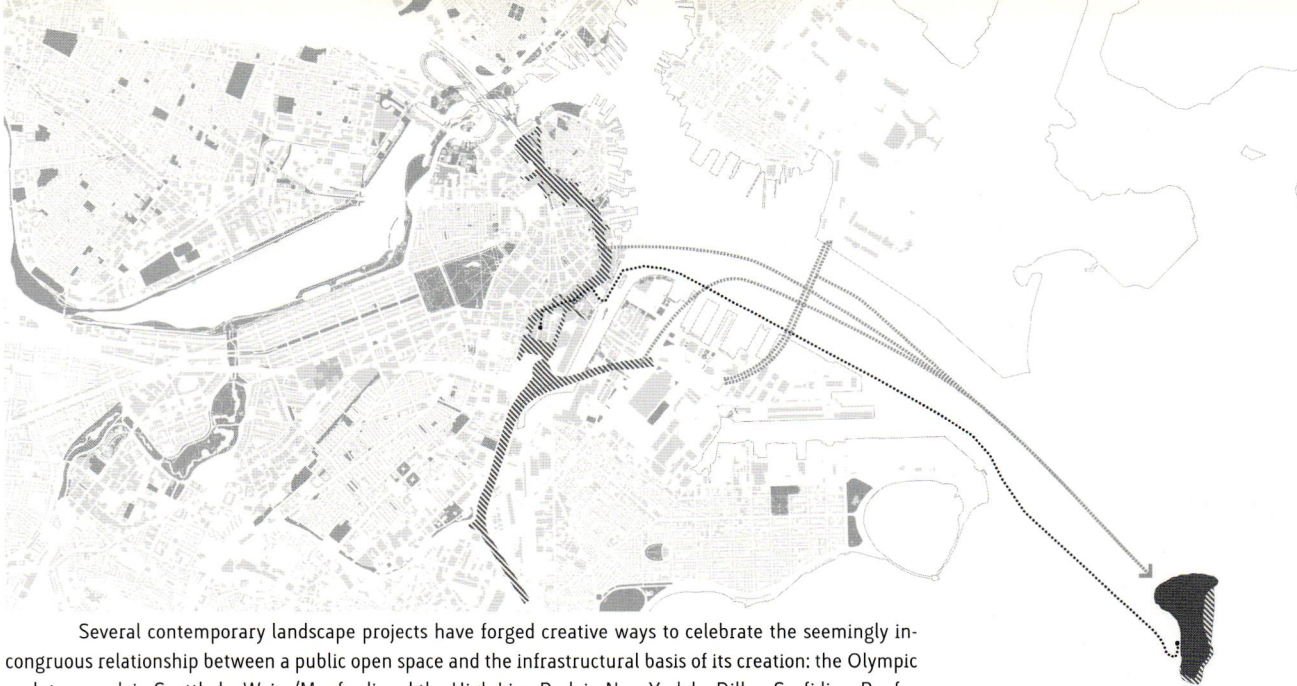
A dumbbell-shaped landmass, Spectacle Island can only be accessed by boat; departing from the Aquarium just off the Greenway, the passenger ferry cruises through the history-worn passages of the Boston Harbor and past the fresh-faced ICA, finally docking at the foot of the island between two asymmetrical humps that are covered in tall grasses and still-youthful trees and shrubs. An easy climb up the North Drumlin brings visitors 155' above sea level—the highest point of the 34 neighboring islands—where they are rewarded with an unobstructed view of the Boston skyline. What may not be obvious to spectators is that the connection to the mainland is more than visual; much of the earth underfoot that affords them this advantaged view came directly from the Dig. Over 4,400 barge-loads of clay, dirt and gravel carried from the site of excavation exaggerated the double-hump profile of this island dramatically. With just a short detour from the Greenway, one can step off the hollow ceiling of the Central Artery and clamber up the mounded-up matter it displaced, a sort of geologic time travel.

Contained within Spectacle's camel-humps is the history of the island's curious morphology, its evolution recorded in a thick strata of discarded identities. As the nearby city dealt with the transformative processes of growth and modernization, the island performed a num-

ber of support functions, such as housing a farming community and providing a source of lumber for shipbuilding. But at a secure remove from the mainland, the island acted primarily as a receptacle for the city's unwanted matter, hosting at different times a disease quarantine, a horse-rendering plant, a gambling resort, and, until the 1950's, a city dump. Once its slow subtraction commenced on the mainland, the Artery too, in effect, became superfluous matter added to the drumlins' repository. Incrementally altered by Boston's urbanization, the island embodies the constant state of transformation that characterizes public works. The millions of cubic yards of fill eliminated from downtown capped the landfill at Spectacle with a new layer of topography as well as a new but still unformed identity: Spectacle Island as an urban park.

In more or less direct ways, many public works projects enact similar transfers of material or exchanges between dislocated sites. 70% of Boston's current metropolitan footprint is fabricated, with new landmass generated by dredging local waterways or by cut-and-fill projects over the years—the Back Bay district being one such addition, a modernist graft of gridded streets onto the unsystematic historical city. The engineering of a new ground enabled the city to grow, but it could also be understood as a product of the transformative forces of infrastructural need, the inevitable expression of the reflexive relationship between human activity and place.

By some measures, the addition of Spectacle is a doubling of the open space gained by the efforts that buried the Central Artery. On the other hand, the displacement of this enormous amount of matter from the Big Dig site enabled a compounded erasure. The Greenway appears as a voided territory, a negative image emerging in the departed shadows where the Central Artery once stood, while Spectacle Island takes on the transferred irregularities of the disrupted landmass, and uses it to cover over a landfill with a naturalistic landscape.



Several contemporary landscape projects have forged creative ways to celebrate the seemingly incongruous relationship between a public open space and the infrastructural basis of its creation: the Olympic sculpture park in Seattle by Weiss/Manfredi and the High Line Park in New York by Diller, Scofidio + Renfro are notable in this regard. The simultaneous identities of these sites—incorporating residual aspects of their original function while reconceiving their vital role as urban parks—accepts the challenging condition created by the open-ended temporality of public works. Public space must likewise be agile, actively engaging the ongoing production of the public sphere, whether in terms of infrastructural works or public parks.

Sharing the explicit purpose of providing green space for recreating, the Greenway and Spectacle Island offer different versions of the urban park: one cites a pastoral ideal as a surface condition and the other recreates a marine wild on a dramatic topography. Beneath the idyllic veneer of either representation of nature, these sites both participate in an ongoing project of public works as both product and producer of infrastructure. Dispensing of the false opposition of an authentic nature and pure artifice, the lesson of Spectacle Island and the Greenway is the double negative: matter subtracted from one site of public works is displaced to cap the accumulated products of another. A landfill becomes park and a raised highway is erased from view. The kill-two-birds motivation provides an infrastructural logic for the strange hybridity of these parks, but stops short in incorporating more active design strategies.

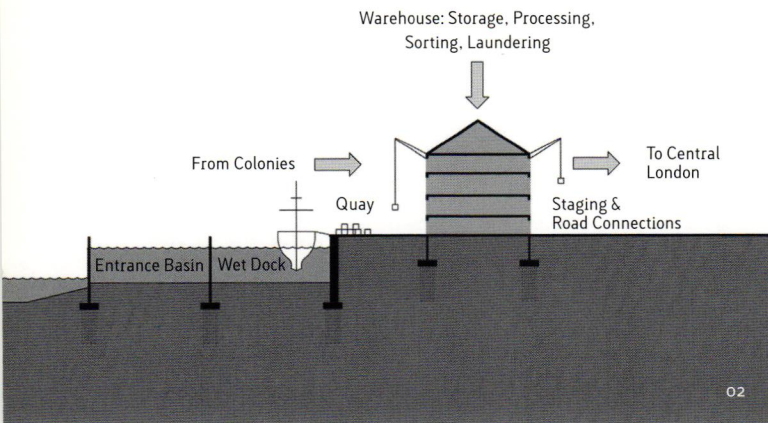
Following the efferent routes of matter and the transferred rationale of infrastructural expediency, it becomes clear that no public project is a self-contained arc from start to finish with a definitive footprint of civic improvement. Rather, public works are an ongoing procedure enacted on the expanded technological landscape of the city, a transitive process, where parks figure in both as public space and public image.



Endnotes

Editor's Note: Further speculations on the Big Dig can be found in J. Meejin Yoon and Meredith Miller's recently published *Public Works: Unsolicited Small Projects for the Big Dig* (Hong Kong: MAP Book Publishers, 2009).

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Sectional diagram of the West India Dock enclave showing the movement of imports through the site.

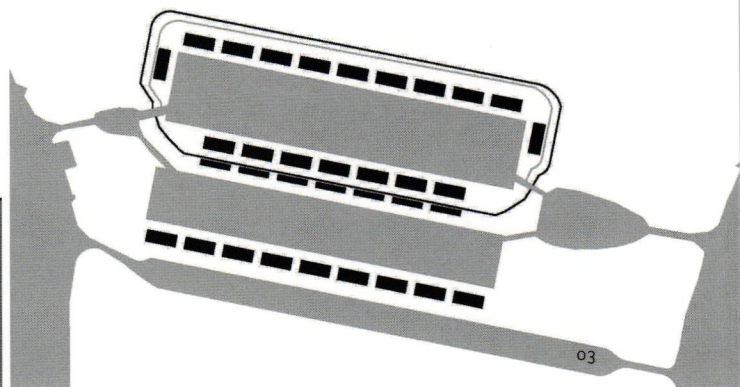


Diagram of the proposed warehouse urbanism on the Isle of Dogs showing warehousing surrounding the import dock to the north of the export dock.

58 defined spatial boundaries, the state found it increasingly difficult to find a use for the alternative sovereignty of pirates.¹⁴

In fact, pirates became a hindrance to the activities of the state, and merchants (especially the British East India Company) began to have difficulties keeping trade routes open to India because of the British piracy. When the British pirate William Kidd attacked and plundered the British ship *Quedah Merchant* in the Indian Ocean in 1698, it was the last straw. Kidd claimed that the ship was flying a French flag at the time of attack, but there was no supporting evidence of this, and he was arrested even though significant members of the state and the East India Company had invested in his actions. In *To Rule the Waves* Arthur Herman explains Kidd's situation:

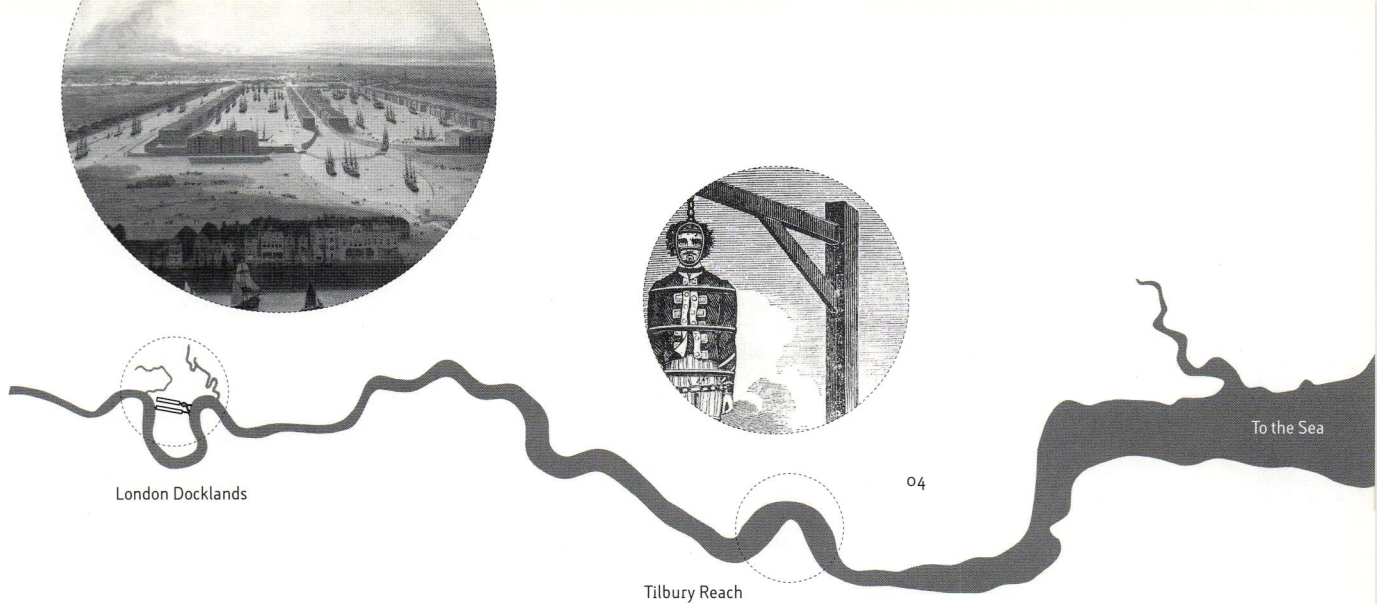
Kidd had fallen victim of a new, less tolerant attitude towards the time-honored tradition of theft at sea. A few years earlier Kidd's exploits would have been business as usual. His investors included not just Governor Bellomont but...Edward Russell, now Lord Orford, along with three other Whig peers—and even, for a 10 percent cut, King William III.¹⁵

Even though Kidd's piratical activities happened overseas and miles away from the capital, he was brought back to London for punishment and hung at Execution Dock on the banks of the Thames in 1701. Afterwards his body was displayed in a gibbet (a metal cage for the bodies of the executed) in Tilbury Reach for an extended amount of time; ten miles downriver from London where the river channel constricts, incoming ships would have to navigate around this point—and Kidd's body—very slowly. John Rocque's map of London from 1746 shows many tiny symbols for the gibbet, all located along the banks of the Thames.¹⁶ The Isle of Dogs, where the West India Docks were built some fifty years later, features three symbols for the gibbet along its curving edge; passing ships were to have a clear view of the gibbet and its gruesome contents as they sailed into port [fig. 4].

The development of the gibbet and Execution Dock established the state's new lack of tolerance for piracy. In *Discipline and Punish: The Birth of the Prison*, Michel Foucault writes of a similar strategy in 18th century France: "The body of the condemned man was...an essential element in the ceremonial of public punishment."¹⁷ In Kidd's case, the exhibition of his body expressed the new alliance between state and Company control; these piratical acts became catalysts and irritants that precipitated political and spatial developments in London. In the eighteenth and nineteenth centuries, however, Execution Dock and the gibbet were used less as a new species of urbanism became the chief instrument of controlling and mitigating difference in the liminal space of import. Enclaves of dock compounds were built at the edges of the Thames; a new spatial language emerged in the port.¹⁸ The interface between the East and West India Companies, other pirates, and the city of London fueled this strain of warehouse urbanism that developed only where trade networks converged in London's docklands.

Before entering the river, ships were under the influence of naval laws that existed outside the state. This international sovereignty of the high seas often involved actions permissible at sea yet illegal on land. Once on land, this extra-state sovereignty was replaced by the sovereignty of the state; the border between the open seas and the port of London was the site of negotiation between these two realms of power. Wet docks on the Thames enforced this border; in their enclaves, policing systems emerged and were rehearsed as mechanisms of asserting state control.

After an abortive attempt at holding an architectural competition for a master plan in 1799, a proposal for a compound of excavated wet docks, quays, and warehouses all enclosed by a thirty foot high wall was presented to the Corporation of the City of London.¹⁹ The site ultimately chosen for the construction was on the Isle of Dogs, a peninsula of land to the east of the City formed by a meander in the river. The proposal for the West India Dock effectively quarantined all trade coming from the West Indies in a securable system of wet docks. The plan



dictated a sequence of ships entering the wet dock, berthing at the quayside, and systematically unloading cargo [figs.2,3].

In this enclave that both enabled a particular species of piracy (the duplicity of the West India Company) and protected against other illicit activities, the metrics of trade influenced the form of the structures. The depth of the wet docks was determined by the draught of a fully loaded merchant ship; the metrics of the barrels that West India merchants used to ship sugar (now introduced to the city's diet on a large scale) dictated the floor to floor heights and the loading capacities of warehouses that were built within the enclaves. The architecture and infrastructure of the port responded to forces from beyond the city as they met the London market.

A tract printed in 1799 explains the merchant's point of view regarding the plans for the port: "no Plan can effectually remove the Evil and Loss sustained under the present system, which does not provide for a Part of the Trade of the Port in Wet Docks..."²⁰ The merchant was naturally motivated by profit: if the goods entering the city could be stabilized in warehouses and released when demand in the market rose, risk could be minimized. The impact of acts of piracy outside the structure of the West India Company could be lessened while the acts of piracy by the West India Company could be further enabled inside the enclave. The wet dock space that the City of London proposed was removed from the shipping lanes of the river, and received the ships directly as they came in from the sea.

Once reaching the Isle of Dogs, the ships were immediately brought into a system of locks and docks; the crew remained on the ship until she was docked and a revenue officer could board. Both the crew and the cargo were unloaded while the ship is docked and "under the entire control of the Revenue and Dock Officers."²¹ The warehouses were located "immediately contiguous" to the docked ship, and these spatially contiguous warehouses with adjacent quay space allowed the unloaded cargoes to be systematically and precisely handled. Goods flowed from the ship to the quay to the warehouse in one simple sequence, enclosed with a system of unassailable walls that surrounded and controlled the whole enclave. The only means of entrance and exit was through a heavily monitored gate.²² The enormous scope of these walls and gates can still be discerned from the remnants at the West India Docks [figs.6-8].²³

The choreographed sequence of movement within the dock walls was scripted in the proposal for the buildings at West India Docks. This script included the roles of Revenue officers and Landing Waiters, two antecedents to a dock-side police force.²⁴ The notion of a police force was eventually developed as a result of Patrick Colquhoun's exposition of waterside crime. A magistrate of the East End and an avid statistician, Colquhoun realized that the rampant piracy within the port was taking a toll on the profits of the import companies. Convinced by his argument, the West India Company, with assistance from the government, funded what would

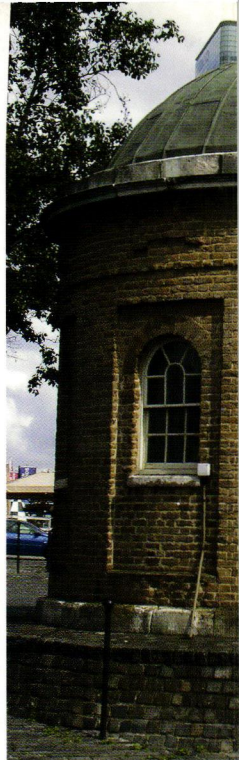
become the Marine Police force, which patrolled the river and monitored the West India Docks along with the Military Guard and the Peace Officers.²⁵ The Peace Officers, formed in 1802, specifically patrolled the warehousing compound and were essentially constables with surveillance duties. Like the Military Guard, the Peace Officers were a land-based police force. Accommodations such as guard stations and check points were provided for both these forces within the walls of the warehousing enclave at the West India Docks.

Two “round houses” or detention areas were commissioned by the West India Company shortly after the warehouses were completed. The architects of the warehouses, George Gwilt and his son, also George, designed the two small structures which were round in plan and roofed with a small dome at the North and South sides of the docks. One of the round houses was used primarily to store weapons and the other was a guard station, but both functioned as interrogation and holding cells for suspects caught within the West India Dock’s walls [fig. 5]. Surrounded by moats and connected to the rest of the compound via drawbridge, the round houses were designed by the Gwilts in the same austere neo-classical style as the warehouses at the West India Docks, but they take on an architecture of surveillance reminiscent of Jeremy Bentham’s Panopticon, designed in 1785. The high enclave walls surrounded a zone of surveillance. “Inspection functions ceaselessly. The gaze is alert everywhere.”²⁶

The links between surveillance, commerce, piracy, and changes in the urban fabric explored by this study are frequently subtle. It is often difficult to establish causal links between imports and changes in infrastructure. However, it seems more than coincidence that in 1799, when only 32,000 hogsheads of sugar could be accommodated at the existing riverside warehouses and quays and when the West India Company was importing an average of 100,000 to 120,000 hogsheads a year, an architectural competition was announced for a design to accommodate the extra hogsheads.²⁷ Many authors agree that London’s port in 1800 was ready for change, largely because of the cultural changes and differences that flowed into the city through the area. The port was a membrane through which different worlds came in contact. The increase in contact at the beginning of the 19th century engendered changes in the physical fabric of the city.

Today, extra-state actors with dispositions akin to the East and West India Companies still influence the creation of space. Warehouse urbanism is still used in an effort to mediate, control, and obscure difference. Territories with spatial implications similar to those of the compounds created in the port of London are still constructed.²⁸ Networks enable the execution and realization of grand global strategies, and even if their dispositions have changed, architectures of surveillance and control remain as places to critique power and understand difference.

05: The last remaining Round House at the West India Docks. 06: The remaining warehouses at West India Import Dock today. 07: A replica of the old West India Dock entrance gate. 08: A remnant of the wall that once surrounded the site. The walls were continuous with the facades of the warehouses to create a continuous boundary around the compound.





Endnotes

1. For more on this, see the diary of Samuel Pepys (1633-1703), an administrator in the British navy and avid diarist from 1660-1669. His diary documented many aspects of everyday life in the 17th century, including experiences with unfamiliar foods and beverages. The diary can be accessed on-line from several sites. <http://www.pepysdiary.com/> (accessed 12 September 2008) is especially useful because of its search options.
2. Richard B. Sheridan estimates that sugar consumption in England and Wales between 1663 and 1775 increased by 20 times. See *Sugar and Slavery: An Economic History of the British West Indies, 1623-1775* (Traverse City, MI: Canoe Press, 2000) and Sydney Mintz, *Sweetness and Power: The Place of Sugar in Modern History* (New York: Viking, 1985) for a more thorough discussion of the role of sugar's consumption and production in early modern global markets.
3. Other British cities such as Bristol and Liverpool reorganized their ports as a response to the increase in imports as well. Arthur Herman, in *To Rule the Waves* (New York, NY: Harper Collins, 2004), explains that "Bristol was the first port outside London to reorganize itself on the basis of the sugar trade" (273).
4. The Weaver's Riots highlight an example of this: in the late 1600s the East India Company imported silk already woven into cloth from Asian markets for sale on the English market. This import directly undermined local weaving businesses, and weavers rioted in protest. In one case the East India House itself was attacked by the weavers. In 1700 an Act of Parliament was passed prohibiting the Company from importing silks that had been already woven into cloth, yet this does not seem to have hampered the East India Company's sales of cloth. See William Roger Louis, Nicholas Canny, P.J. Marshall, Judith M. Brown, eds., *The Oxford History of the British Empire* (Oxford: Oxford University Press, 1998), 277-8.
5. See Hiram Bingham's account of Elihu Yale's activities in India in *Elihu Yale, the American Nabob of Queen Square* (New York: Dodd, Mead & Company, 1939).
6. In *London 1: The City of London* in the "Buildings of England" Series, Nikolaus Pevsner discusses the East India Company's Cutlers' Gardens warehouses in the City. What Pevsner glosses over is that the East India Company did not have extensive warehousing at their docks, certainly not to the same extent that the West India Company did. Nikolaus Pevsner, ed., *London 1: The City of London* (London: Penguin, 1997), 476.
7. Arthur Henry Beavan's book *Imperial London* (London: J.M. Dent & Co., 1901) describes the city's imports during the height of empire. Another good discussion is found in Jonathan Schneer's *London 1900: The Imperial Metropolis* (New Haven: Yale University Press, 1999). Even though Schneer is writing about London 100 years later than this study, he paints a picture of the port as a "nexus of empire", where difference in the form of goods and people flowed into the imperial capital.
8. Hoh-Cheung and Lorna H. Mui, "William Pitt and the Enforcement of the Commutation Act, 1784-1788", *The English Historical Review*, Vol. 76, No. 300 (Jul. 1961), 447-465. A tea sale in the East India House in Leadenhall Street is discussed as a backdrop to the history of Pitt's enforcement of the Commutation Act.
9. John Summerson, *Georgian London* (New York: Charles Scribner's Sons, 1946), 243.
10. See Walter Stern, "The First London Dock Boom and the Growth of the West India Docks", *Economica*, New Series, Vol. 19, No. 73 (Feb. 1952), 59-77 for a description of the chaos in the port and a discussion of West India Company shipping statistics.
11. Patrick Colquhoun, *A Treatise on the Commerce and Police of the River Thames: Containing an Historical View of the Trade of the Port of London; and Suggesting Means for Preventing the Depredations Thereon, by a Legislative System of River Police. With an Account of the Functions of the Various Magistrates and Corporations Exercising Jurisdiction on the River; and a General View of the Penal and Remedial Statutes Connected with the Subject* (London: J. Mawman, 1800) uses a colorful vocabulary including the terms "heavy horsemen", "scuffle-hunters", and "mudlarks" to describe the dockside thieves.
12. See Thomas Gallant, "Brigandage, Piracy, Capitalism, and State-Formation: Transnational Crime from a Historical World-Systems Perspective", *States and Illegal Practices*, Josiah McC Heyman, ed (New York, NY: Berg, 1999), 27-8.
13. Ibid.
14. N.A.M. Rodger, *The Command of the Ocean* (New York, NY: Penguin, 2004), 162-3.
15. Arthur Herman, *To Rule the Waves* (New York, NY: Harper Collins, 2004), 247.
16. John Rocque, *An exact survey of the city's of London and Westminster, ye borough of Southwark... London: 1746*. This map is in the collection at the Beinecke Library at Yale University in New Haven.
17. Michel Foucault, *Discipline and Punish: The Birth of the Prison* (New York, NY: Vintage, 1995), 43.

18. Piracy and extra-state actors also engendered architecture in coastal cities such as Gibraltar, Halifax, Savannah, and Key West. Often the architecture was the residue of the military intervention to prevent piracy. See Arthur Herman's book, *To Rule the Waves: How the British Navy Shaped the Modern World* (New York, NY: Harper Collins, 2004), 233-236. See also Thomas Gallant, "Brigandage, Piracy, Capitalism, and State-Formation: Transnational Crime from a Historical World-Systems Perspective", *States and Illegal Practices*, Josiah McC Heyman, ed (New York: Berg, 1999), 40.

19. Sir John Soane was employed by the West India Company as the juror of this competition, but he found the entries to be difficult to evaluate. In correspondence to the directors, Soane wrote, "It appears to me that the foregoing designs contain the same accommodation for storage of goods, although they differ widely in the extent of the Building, as well as in many other leading points..." from Vol. 89, *Volume of designs relating to the competition designs for Warehouses etc for the West India Dock Company, 1799-1800*, marbled boards (370 x 235) currently in the collection at the Soane Museum Archive, Lincoln's Inn Fields, London.

20. *A brief comparative statement of the merits of the two plans now under the consideration of Parliament, for improving the port of London, by wet docks, &c.* (London, 1799), 1.

21. *Ibid.*, 2.

22. *Ibid.*

23. The Survey of London describes the construction of the walls at the West India Docks:

Survey of London: volumes 43 and 44: Poplar, Blackwall and Isle of Dogs, "The West India Docks: Security", (1994), 310-13. <http://www.british-history.ac.uk/report.asp?compid=46499>. Accessed 2 April 2007.

24. *Copies of reports of the Elder Brethren of the Trinity House, and of the practical officers of the revenue, on the plan for improving the port of London at the Isle of Dogs* (Trinity House, London, 1799), 2.

25. Hermione Hobhouse, ed. "The West India Docks: Security", *Survey of London: volumes 43 and 44: Poplar, Blackwall and Isle of Dogs* (1994), 310-13. URL: <http://www.british-history.ac.uk/report.asp?compid=46499&strquery=Patrick%20Colquhoun%20police%20docks>. Accessed 20 April 2007.

26. Michel Foucault, *Discipline and Punish: The Birth of the Prison* (New York, NY: Vintage, 1995), 153.

27. Walter Stern, "The First London Dock Boom and the Growth of the West India Docks", *Economica*, New Series, Vol. 19, No. 73, (Feb. 1952), 59-77.

28. Today Free Trade Zones (FTZ) Special Economic Zones (SEZ) and Export Processing Zones (EPZ) are three examples of areas that are similar in disposition to the warehouse urbanism built by the West India Company. These types of zones are typically geographic areas within a nation that are allowed more relaxed laws than the surrounding area to engender investment and financial gain. Additionally these areas give rise to a species of architecture that in spirit if not in form is similar to that of the compound built by the West India Company.

Image credits: Figs. 1 and 4 courtesy of the Yale Center for British Art, Paul Mellon Collection and the author. Figs. 2, 3, and 5-8 courtesy of the author.

10

Occupying a Third Space: The Haskell Free Library on the U.S.–Canada border

Anne-Marie Armstrong

64

The Haskell Free Library is unique among libraries in that it was purposefully designed to straddle the 49th parallel [fig.3]. Built in 1904 to serve the residents of Derby Line, Vermont and Stanstead, Quebec equally, this project and its historically contentious site can be seen as an intersection of political, geographical, and social boundaries that powerfully challenge the notion of a territorial edge [fig.2].¹ The library is recognized by both nations as a 'no-man's land'; when inside the space, however, one is constantly alerted to its unconventional orientation. The border is represented by a thick, black line painted onto the hardwood floor of the library, running uninterrupted through the space, passing under the circulation desk and through book stacks [fig.1]. The lobby is in the United States whereas the stacks are primarily in Canada; the upper floor of the library serves as an opera house, which was originally conceived of as a way to generate income for the library. Here, one can watch a performance enacted on the stage in Canada while being seated in the US. Creating a gap in an otherwise unremitting territorial line, the Haskell Free Library is a space of inclusion that offers a marked contrast to the increasing opacity and impermeability of the United States' borders.

The idea for an international public library was conceived by prominent townspeople Martha Haskell in the late 19th century, who sited the project on the border as a way to cement the close ties that existed between community members on both sides of the line. Martha (Stewart) Haskell was born on April 28, 1831 in Quebec (her father was considered to be "one of the wealthiest men in the county")² and later married Vermont merchant Carlos Haskell in 1821 but was widowed fourteen years after the union. Through her binational family history and her own dual-citizenship, she became a powerful force in the making and maintaining of an identity for the border community of Stanstead and Derby Line, in which she resided until her death in 1906.

The site Haskell chose for the library was a place of wartime mediation between binational residents nearly a century earlier. The 1901 laying of the cornerstone for the library was by definition an international event. The ceremony was heavily attended by Freemasons from both nations because the Golden Rule Lodge of Vermont and Lively Stone Lodge of Quebec had met there to keep the peace between the US and Canada during the War of 1812. An 1861 Freemason account describes the tense atmosphere in the borderlands during this period of war:

The frontier inhabitants regarded each other with jealousy and distrust, and nothing but some overt act of petty malice was wanting to kindle a sanguinary border warfare. The two lodges, by appointing peace committees, who held weekly and almost daily sittings, working in unison...restored confidence among the settlers and upon two different occasions, mobs of armed men were dispersed through the intervention of the committees.³

The ground of the library was thus inscribed with a compelling history of bilateralism. It was already

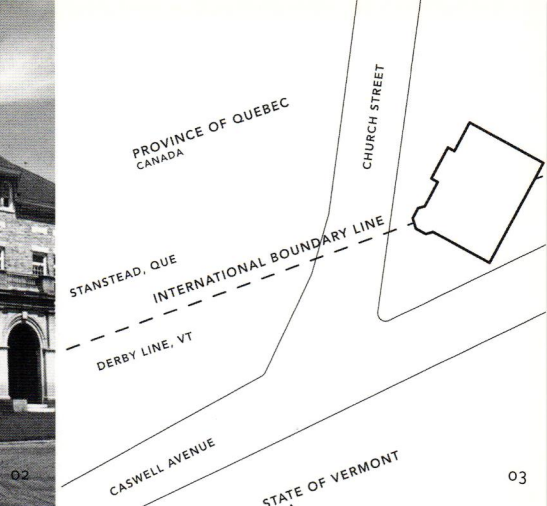


01



CANADA

UNITED STATES



03

The Haskell Free Library reading room, located on the ground floor. Canada is to the left and the U.S. to the right.

The Haskell Free Library bisected by an imaginary line. The front entrance is in the U.S. and the back is in Canada.

Site plan of the Haskell Free Library.

a space set aside from the tyranny of territorial control – a place where warring factions could meet and reach compromise. Haskell’s decision to situate the library on this site acknowledged this memory and extended the notion of a ‘third’ space of arbitration from that of an international lodge exclusive to male Freemasons towards that of a public space which invites all members of the community to take part in the act of daily mediation and the building of a community across international lines.

This shift from exclusivity to public accessibility embodied in the Haskell Free Library was contemporaneous with the development of the modern public library, an institution which derives from a Victorian prototype and which aimed to mediate the public and private realms. Women, who until then had been generally excluded from active participation in the making of public spaces, played a pivotal role in the development of the public library.⁴ The Carnegie library program, which built over 1700 new libraries in North America between 1883 and 1929, was a springboard from which newly appointed female librarians deploying the concept of ‘municipal housekeeping’ were able to take a leading role in library design and practice and to promote the equality of its diverse patrons.⁵ Thus measured on several scales, the

Haskell Free Library is a powerful “third” space bridging both gendered and international boundaries.

Today, the increased hardening of the U.S. border has effectively stifled public gathering and exchange in a town where informal crossings were once everyday activities. Before a townspeople may venture over the line, he or she must report to a port of entry inspection station for the country he or she is entering.⁶ The installment of video surveillance and the strong presence of border patrol officers further reinforced this divide. Because of its status as an unclaimed territory, the Haskell Free Library remains the only mutually accessible meeting space for this border community. The press recently reported that no guards are stationed on the “quiet, shady streets” around the library, and Canadians who cross into Vermont to enter the library on the U.S. side do not need to show their passports at a border station, as they do when crossing for any other purpose.⁷ The library continues to function despite the militarized control of the space surrounding it by its very ability to house and express the collective memory of this transnational community. In a milieu of extreme territorial enforcement, the Haskell Free Library presents itself as a gap in the enforced realities of territorial life, a functional emblem of the binational community.

Endnotes

1. The Haskell Free Library has two street addresses. The Canadian address is: 1 Church Street, Stanstead Quebec. The U.S. address is: 93 Caswell Avenue, Derby Line, Vermont. The library also has two official languages, English and French.
2. Matthew Farfan, *The Making of the Haskell Free Library and Opera House: The Construction Years, 1901-1904* (Quebec: Haskell Free Library Inc., 1999), 5.
3. Lee S. Tillotson, *Ancient Craft Masonry in Vermont* (Vermont: Capital City Press, 1920), 135.
4. See Abigail A. Van Slyck, *Free to All: Carnegie Libraries & American Culture* (Chicago: University of Chicago Press, 1995) for a history of the professionalization of female librarianship and their role in the development of the public library.
5. Dolores Hayden, *The Grand Domestic Revolution: A History of Feminist Values* (Cambridge: The MIT Press, 1981), 79.
6. “A Quiet Imperiled on Vt.-Canada Line: Library at Center of Border Battle”, *The Boston Globe* (June 24 2007, Arts section).
7. “Life in Border Towns has Always Presented Challenges for Residents. But What About a Community that Straddles Both Sides of the Canada-U.S. divide?” *Toronto Star* (June 12 2007, Focus section).

Image Credits: Fig. 1 courtesy of Doug Murray/Border Films, 2002. Figs. 2-3 courtesy of the author, 2007.

Signifyin': African-American language to landscape

Scott Ruff

66

The language of blackness encodes and names its sense of independence through a rhetorical process that we might think of as the Signifyin(g) black difference.

Henry Louis Gates, Jr.¹

Within African-American culture, *signifyin'* refers to a particular rhetorical act that informs many of the culture's most well known productions, from music and literature to religion and politics. Its potential, however, extends beyond the verbal; is the intention of this text to present *signifyin'* as a critical mode that informs visual and spatial work, particularly that of African-diasporic aesthetic traditions.² An analysis of the work of two African-American figures— Jean Michele Basquiat and Walter Hood— illustrates this clearly; each uses different mediums, but both operate within a similar cultural tradition of conceptualization and space making.

If “signification”, in Standard English, refers to the meaning that a term conveys, then “*signifyin'*” refers to the critical play of terms, the transposition of meaning.³ *Signifyin'* is thus the primordial material upon which hip-hop music, the blues, jazz, spirituals, and African-American work songs are drawn. The skills of *signifyin'* were at the core of Martin Luther King's strategy in the Civil Rights movement and can likewise be seen in Frantz Fanon's “Lament” and Cornell West's “Blues” culture. The technical devices most associated with it are rhyme, rhythm, and incremental repetition, interlaced with improvisation and phonetic manipulation for emphasis and syncopation. The most significant analysis of *signifyin'* was made by Henry Louis Gates Jr. in his book *The Signifyin(g) Monkey* (1988); Gates identifies the word “*signifyin'*” as one of the most important double-voiced verbs in African-American language, essential not only to language, literature, and music, but to the broad spectrum of African-American rhetorical culture.⁴ Gary Saul Morson has likened it to “a special kind of palimpsest” where the uppermost text (term) is a commentary upon the text beneath it.⁵

Signifyin(g) entails a formal revision of, and intertextual relation to, the English language. It is the simultaneous act of a critical analysis and a critical synthesis of a given person, situation, or system and is most effective when perceived strengths of a system are exposed as weaknesses to be exploited. The tactics of *signifyin'* are deployed on various fronts of the user's power relationships. In speaking to friends and equals, aggression and directness are equally appropriate. When speaking to those in positions of power, indirection, innuendo, and implication become the appropriate strategy.

In the identification of *signifyin'* as a cultural trope, Gates points to the body of mythological African-American narratives which revolve around the pet of the Yoruban spirit Esu-Elegbara, a trickster monkey who manipulates the meaning of words and events to cause— or get out of— trouble.⁶ Like Esu himself, the monkey is the master of many rhetorical tools: metaphor, metonymy, and synecdoche, as well as irony, hyperbole, and

catachresis. The translation of this character from African stories into mainstream African-American culture is a story in and of itself— one that Gates ponders over— but there is no doubt that already in the days of slavery, the monkey became internalized in the African-American experience, whether in language games, daily acts of conversation, or even in formal settings like church.⁷ *Signifyin'*, then, can operate simultaneously as an explicit theme, as an implicit rhetorical strategy, and as a principle of literary history.⁸

Though *signifyin'*, as a theoretical designation, is a relatively recent intellectual construct – in visual culture as in language – its techniques resonate historically back to early black culture. In fact, it is possible to see the presence of its principles in early quilts made by slaves in the South [fig.4]. The technique known as “break composition”, for example, has *signifyin'* characteristics; it is the disruption of pattern and regulation.⁹ To create a break in composition is to break from explicit ordering systems like lines, boundaries, and grids using operations such as shifting, skipping, jumping, fragmenting, and repeating elements.

This way of approaching composition is present in the work of noted African-American painter Jean Michel Basquiat (1960-88), the son of Puerto Rican and Haitian parents who became well known in the New York art scene beginning in the 1980s as part of the so-called Neo-expressionist movement. Basquiat took a strong interest in exploring his black identity, lacing his works with references to African spirituality and the complicated richness of diasporic culture.¹⁰ These allusions came by way of collage techniques, photocopying, and writing with print. Most of his work seems to draw heavily on both rhetorical and visual *signifyin'* techniques as well.

In “Despues de un puno” [1987, fig.1], a skeletal magician with a top hat and wand is rendered, flatly in black paint; he is *Baron Samedi*, a Haitian Voodoo *Lwa*.¹¹ Within the field of cool greens and yellow, Basquiat writes the phrase “Rural Landscape” three times. The reds and orange assault the canvas by becoming cross-outs and structural partitions, collectively forming a field composed of figural fragments. Multi-colored newspaper print adds relief to the painting; it is used to articulate a fine broken grid system. White paint, enveloping and weaving through the composition, operates in two capacities; visually, it falls to the background of the painting but the ghost images of color and newsprint push it to the foreground. Variations of the color blue dance around, radiating out of the color black. Lines of diluted paint drips strategically support an underlying compositional structural system. The painting communicates its African-diasporic roots through allegory and structure and its contemporary art roots through collage and expressionist painting techniques. Allegorically the color black creates a large chasm in the picture, a void to be entered; white becomes atmospheric and fog-like, the greens represent the rural landscape, and the newsprint stands in for the play of life. Color is administered in the manner of a patchwork quilt; although not strictly defining the edges of cells, each color is ordered by a fractal-like system of transposed rectangular cells. The painting is a study in storytelling, structure, mark-making, and figure/ field interplay. It is quite clear that for Basquiat, *signifyin'* – as we define it today – figures as an important element in

his artistic production.

In architecture, the principles of disruption, play, and ambiguity are harder to discern for two reasons: the scale is often too large for such actions to be read within their expanded spatial context, and architecture is an art form that is less personal, making it more difficult to generalize about “meaning”. Furthermore, in a white-dominated profession, it is not easy to find ready acceptance of black-oriented positions. This makes the work of Walter Hood (the principal of Hood Design in Oakland, California and a Professor and former Chair of Landscape Architecture at the University of California, Berkeley) all the more remarkable.¹² In his practice, he has made a conscious effort to expand on the themes of black culture, as can be seen in his books *Urban Diaries* and *Blues & Jazz Landscape Improvisations*.¹³ His work is a response to a community call; his approach to design is tactical and in-the-field. He engages the real people of a community, past, present, and future, not just the benefactors of a given project.¹⁴ While the elements of his design may be in step with contemporary mainstream landscape design, his methods and strategies can be seen as specifically connected to African-American land use practices.

There are at least two possible origins of African-American land use that inform Hood’s work: the enslaved African’s counter-cultural use of the southern plantation and African-American yardscapes. Slave quarters were frequently located a considerable distance from the “Big House” on the southern plantation. From the margins of the property, enslaved Africans were able to create their own landscapes. According to Rhys Issac, paths and trails leading into the countryside were common elements of the slave landscape in Virginia.¹⁵ Many of these secret pathways led to clandestine clearings in the woods, occasionally used for rituals, festivities, and meetings. Informal paths also marked particular elements in the landscape, leading to marshes and rivers and providing for expedient travel and communication between plantations. Footpaths cutting across fields to different storage houses were also common. The ensemble of sites, pathways, and visual markers constitute an alternative territorial system based in a desire to avoid visual sight lines and prevent detection by plantation owners.¹⁶ These loose and meandering elements are *signifyin'* in space. They operated as counter agents to the rigidly defined plantation plan, moving along the perimeter of defined landscapes, across fields of high crops, and maneuvering in woods thick with vegetation. Essentially, the enslaved African-American critically read the use of the landscape, literally and figuratively carving out cultural space to dwell within freely. From the perspective of European Americans and Europeans, slaves (when left to building their own quarters) often built in “random” or “chaotic” patterns. In one account, the cabins built by slaves were located “in some secluded place, down in the hollow, or amid the trees, with only a foot path to their abode”. Another account of a village in Beaufort, South Carolina describes a village consisting of boxy frame buildings all in a row— but each was set at an odd, irregular angle to the next.¹⁷ These acts of appropriation of “the master’s space” and the various collective acts here mentioned operate counter to the oppressive culture of the South, but adapt culturally to the hostile environment and the rules of the land, using it to continue the process of culture building.



The long tradition of African-American yard work is another important referent for contemporary cultural land practices. Spatially, the tradition has approached the land as a mannerist reordering through marking and placement more than it has a humanistic Euclidian redefinition. It is about the defining of 'social space' and protection from the perceptible and imperceptible forces of wilderness.¹⁸ The primary spatial objective of the traditional African-American yard is the development of a compound through the use of multiple boundaries, such as walls, fences, and transitions between ground surface materials and also the particularized placement of thresholds into the varied precincts [fig.2].

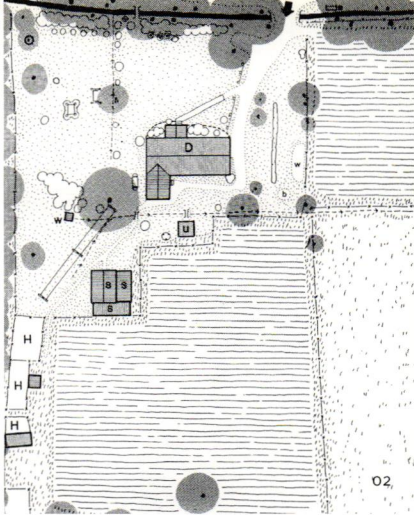
The work of Walter Hood clearly shows signs of operating within the *signifyin'* tradition; African-American plantation survival tactics and "yard work" are major ingredients in his formal landscape canon. Hood uses terms such as "improvisation" and "hybridization" to describe his work. His hybrids are combinations of landscape types, themes, and tropes: orchards, plazas, parks, etc.¹⁹ His improvisations consist of four parts: 1) spontaneous change and the allowance of flexible and adaptive space, 2) self expression of the designer, 3) reinforcement of the familiar sense of historical place, and 4) the transposition of the canon of landscape. The improvisational method is a critical reading of "place" and time mixed with the historical landscape canon to respond to specific physical and social contexts. As Hood writes: "Extending and enriching the tradition of environmental design... improvisation utilizes previous canons as a framework for departure, but demands individual responses."²⁰

Formally and programmatically, Walter Hood is operating in a spatial medium – landscape – in a similar mode as hip-hop, blues, and jazz musicians, each of whose use of mixing, sampling, and improvisation (interlaced with African sonorous sensibilities) has been well documented. In one of his current works, the Foster Homestead and Cemetery, Hood weaves a "counter geometry" of curved, looped pathways into the University of Virginia's existing orthogonal system.

The new paths meander through forest-like groupings of trees around clearings – the house, yard, garden, and burial site – in the woods. By following the new paths, the "object spaces" in the design are approached obliquely. Through the scarification of the ground, the project creates the effect of a palimpsest, allowing the excavated markings of the past to show through the contemporary surface. In this design Hood has created a double-voiced landscape that operates within the American tradition and yet is firmly grounded in the knowledge of African-American spatial practices.²¹

The Virginia Key Beach Museum in Miami, Florida is another landscape design by Hood that exhibits the characteristics of *signifyin'* [fig.3]. The primary formal move of this project is to define the boundaries of the site with a sweeping wall of palm trees, moving north to west. To the south, a large dune garden is interlaced with Hood's hybridized program elements. To the east is the ocean. The design is highly conscious of the articulation of thresholds into the site. The museum, along with other objects, is treated as a ruin – a sculptural, ancestral, and spiritual artifact – in the landscape. In the words of Hood, "Built objects are commingled with the natural landscape providing a specific identity to the rich cultural heritage."²² The overall strategy of the design – from the bounded compound to the use of multiple sculptural objects within the site to the use of parking lot as a front yard and plaza for the main sculptural ruin on the site – allude to traditional African-American yard designs.²³

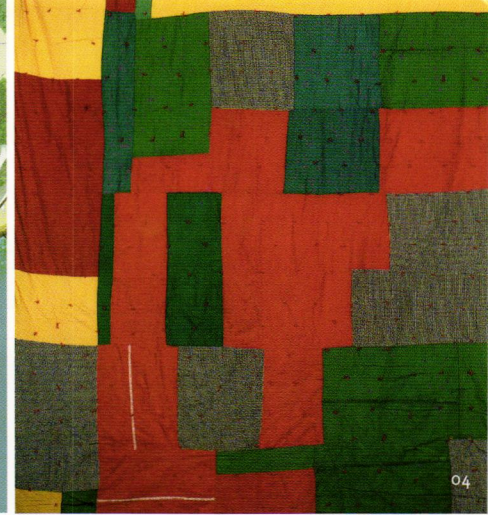
From rhetoric to quilting to collage and ultimately to landscape, *signifyin'* is a principle and a practice that traverses multiple mediums. It is a mode of conceptualization born out of African cultural thought, which is not to state unequivocally that *signifyin'* is only done by people of African decent. Rather, *signifyin'* should be seen as a characterization of a species of values and principles that can inform the work of artisans and critics who insightfully engage African-diasporic creative productions – from language to literature to the spatial arts.



African American Yardscape plan, home of Pershing Campbell of South Carolina



Plan of Virginia Key Beach in Miami, Florida by Walter Hood



Strip Variation Quilt by Mozell Benson, 1991

Endnotes

69

1. Henry Louis Gates Jr., *Signifyin(g) Monkey* (New York: Oxford University Press, 1988), 66. Signifyin(g) is spelled by Gates with the 'g' in parentheses. I have chosen to leave it off to make clear my use of spatial signifyin' verses literary signifyin(g).
2. Within western philosophy Signifyin' is most closely related to Derrida's neologism of Différance, or Deconstruction. Ibid, 46.
3. Signifyin' is a double voiced word... Through the inserting of a new semantic orientation, into a word which already has and retains its own orientation, double voiced words or utterances such as Signifyin' become a profound act of cultural decolonization, in language.
4. Gates Jr., *Signifyin(g) Monkey*.
5. Ibid, 50.
6. Ibid, 18-19. That the monkey is the pet of Esu is a supposition made by Gates.
7. Ibid, 77.
8. Ibid, 89.
9. Maude Southwell Wahlman, *Signs and Symbols: African Images in African-American Quilts* (New York: Studio Books in association with Museum of American Folk Art, 1993), 36. The term used by Wahlman is break patterning. The break common in African based musics is similar to the break in textile practices such as kente cloth design and quilt design.
10. Kellie Jones, "Lost in Translation", *Basquiat*, edited by Marc Mayer (London, New York: Merrell, 2005), 165.
11. Ibid, 177.
12. Craig Barton, editor, *Sites of Memory, Perspectives on Architecture and Race* (New York: Princeton Architectural Press, 2001), 192.
13. See Walter Hood, *Urban Diaries* (Washington D.C.: Spacemaker Press, 1997) and Walter Hood, *Blues and Jazz Landscape Improvisation* (Berkeley: Poltroon Press, 1993).
14. Walter Hood, *Urban Diaries*, 6.
15. John Michael Vlach, *Back of the Big House: The Architecture of Plantation Slavery* (Chapel Hill: University of North Carolina Press, 1993), 13.
16. Ibid, 14.
17. Ibid, 14.
18. Grey Gundaker and Judith McWillie, *No Space Hidden: The Spirit of African American Yard Work* (Knoxville: University of Tennessee Press, 2005), 113.
19. American Society of Landscape Architects website, <http://www.asla.org/land/050205/walterhood.html>.
20. Walter Hood, *Urban Diaries*, 6.
21. Hood Design website, www.wjhooddesign.com/CurrentShadowcatcher.html.
22. Ibid, www.wjhooddesign.com/CurrentKeyBeach.html
23. Ibid.

Image Credits: Fig. 1 reprinted from *Basquiat*, edited by Marc Mayer. Fig. 2 reprinted from Richard Westmacott, *African American Yards and Gardens from the Rural South*. Fig. 3 courtesy of Hood Design. Fig. 4 reprinted from Maude Southwell Wahlman, *Signs and Symbols: African Images in African-American Quilts*.

12

Wal-(medley mixed-up mélange montage mash-up shopping)mart¹

Alexander Maymind and Cody Davis

70

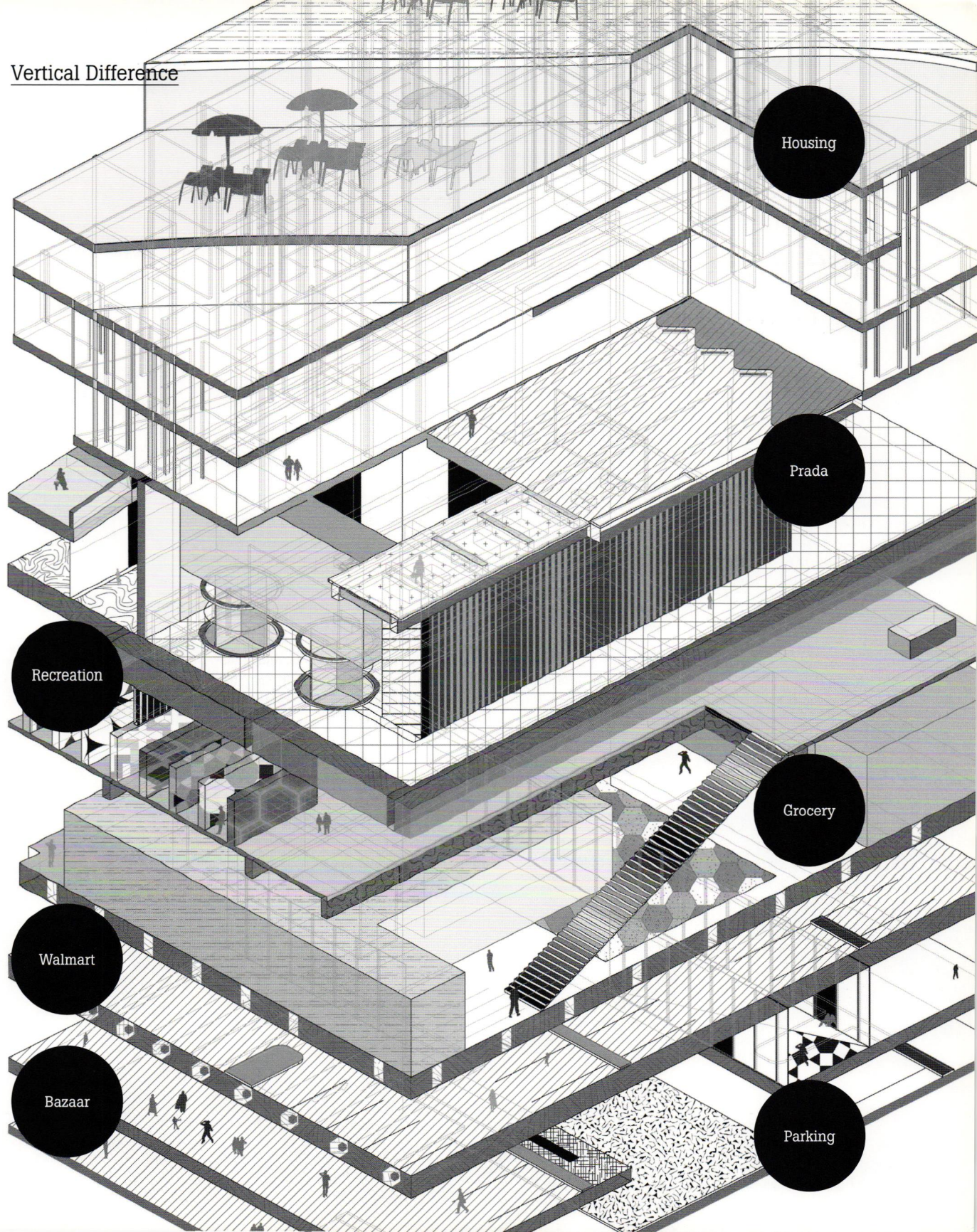
The contemporary architect is caught between the platitudes of utopian ideality and the realities of developer logic. This speculative, hyper-mixed-use project bridges those competing discourses by combining the spectacle of commerce, the banal tribulations of parking, and a sentimental nostalgia for urban street life. This programmatic and infrastructural patchwork— a vertically-oriented Wal-mart superstore, a series of big box platforms, cantilevered parking event-surfaces, and a layer of now ubiquitous “luxury lofts”—is a monstrous hybrid enlivened by the friction between disparate audiences and markets. Parking garages, shopping malls, and landscape urbanism become ingredients in a spontaneous assemblage that forms something appropriate to its site and program but that feels altogether foreign.

The project is sited along the Gowanus Canal in Brooklyn at the intersection of vast big-box shopping, empty horizontal parking lots, and a 95-foot high elevated train platform. To choreograph the movement between these existing conditions and the newly inserted programs, this project uses stacking as its operative technique. The precarious balance between its wide-ranging uses is based on the logic of samples, mash-ups, remixes, and collages without falling into referential aesthetics, remaining equal parts composition and strategy.

The divergent programs of the complex are positioned relative to each other to create highly complex environments laterally, not to a coordinated effect but seeking instead a synergy that results from an unpredictable mix of the banal, the strange, and the affective. The architecture echoes the differentiation fetish of consumer commerce with an array of polychromatic patterns and abrupt juxtapositions, creating a space of maximum heterogeneity. These textures of program, parking, and event create a differentiated realm that redefines and reinvigorates the public space of shopping. In creating an architectural ambition for Wal-Mart that extends beyond efficiency, this project re-conceptualizes the big-box as a parasite—one that snakes around its neighbors, interrupting and interfering with its context but engaging new urban audiences in doing so. The vertical heterogeneity of the complex is made cohesive through a continuous parking infrastructure which parataxically strings together various parts as an involuted datum of constant movement; likewise, a series of elevator shafts act as “skewers” that bind the juxtaposed programs into a legible order. Thus the unified yet jarring set of programmatic “immersions” are tied together as separate constellations; each horizontal expanse offers an array of competing mirages in the distance. At every level, an archipelago of commercial shopping experiences exists in the ether of infrastructure.

1. assortment, blend, brouhaha, charivari, collection, combo, conglomeration, diversity, fantasia, farrago, gallimaufry, heterogeneity, hodgepodge, jumble, mélange, miscellany, mix, mixture, montage, olio, olla podrida, pasticcio, pastiche, patchwork, potpourri, salmagundi, variety

Vertical Difference



Housing

Prada

Recreation

Grocery

Walmart

Bazaar

Parking

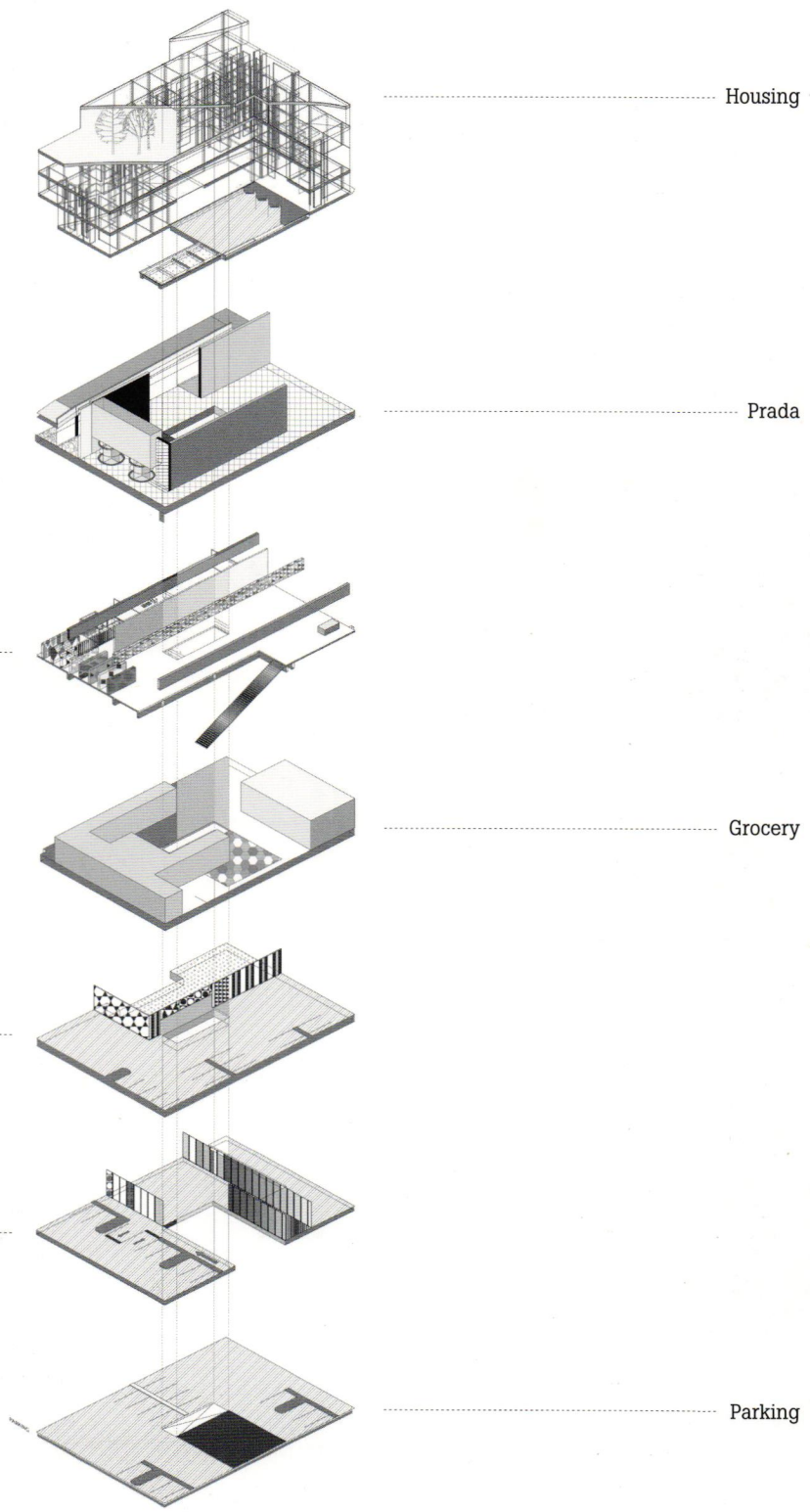
Fashion Week at 85 feet in the air



Wal-Mart Parking lot experience

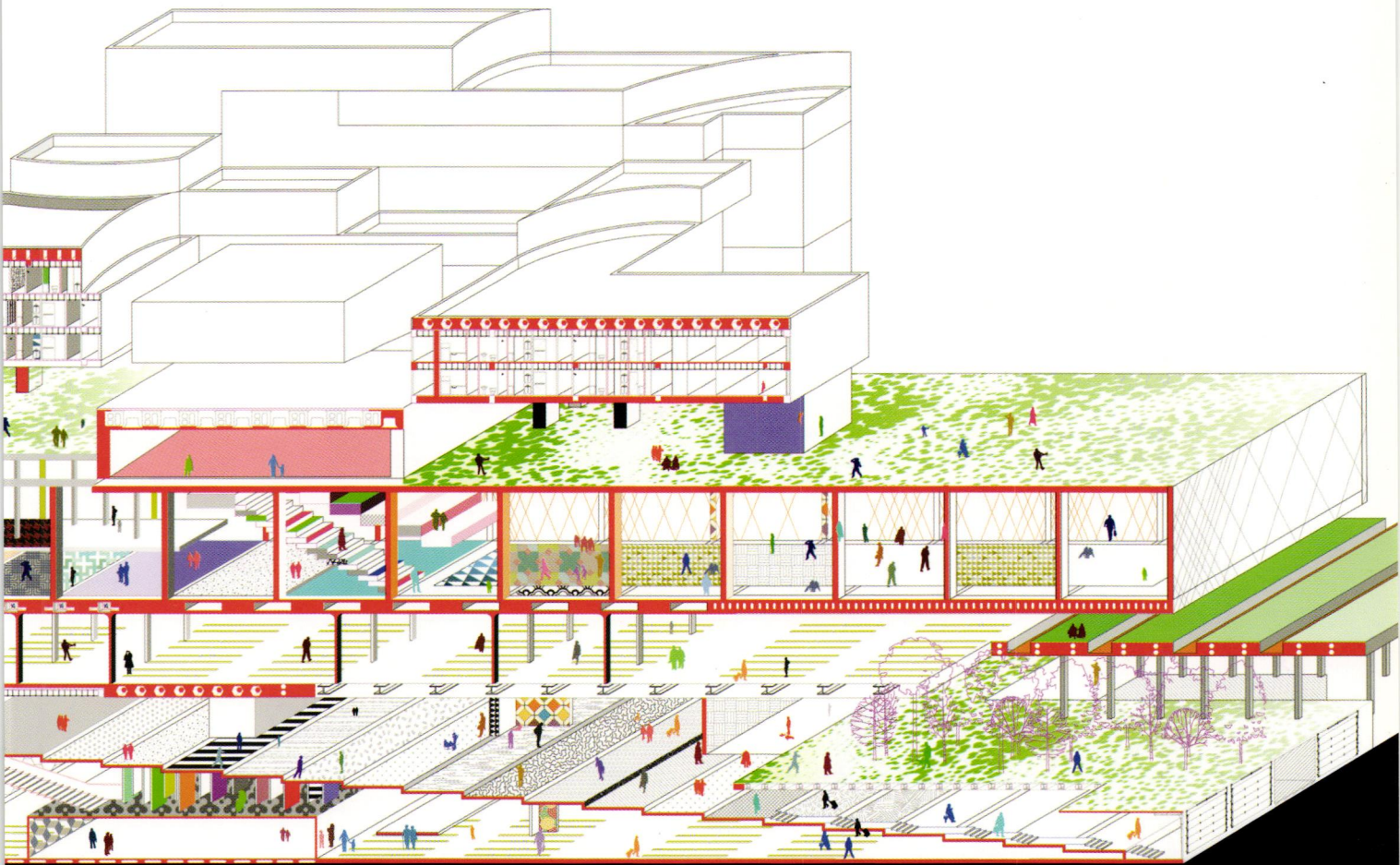


Vertical Difference



Section through complex





13

A Multi-dimensional Valley: A Study of Heterology in Contemporary China

Fei Wang

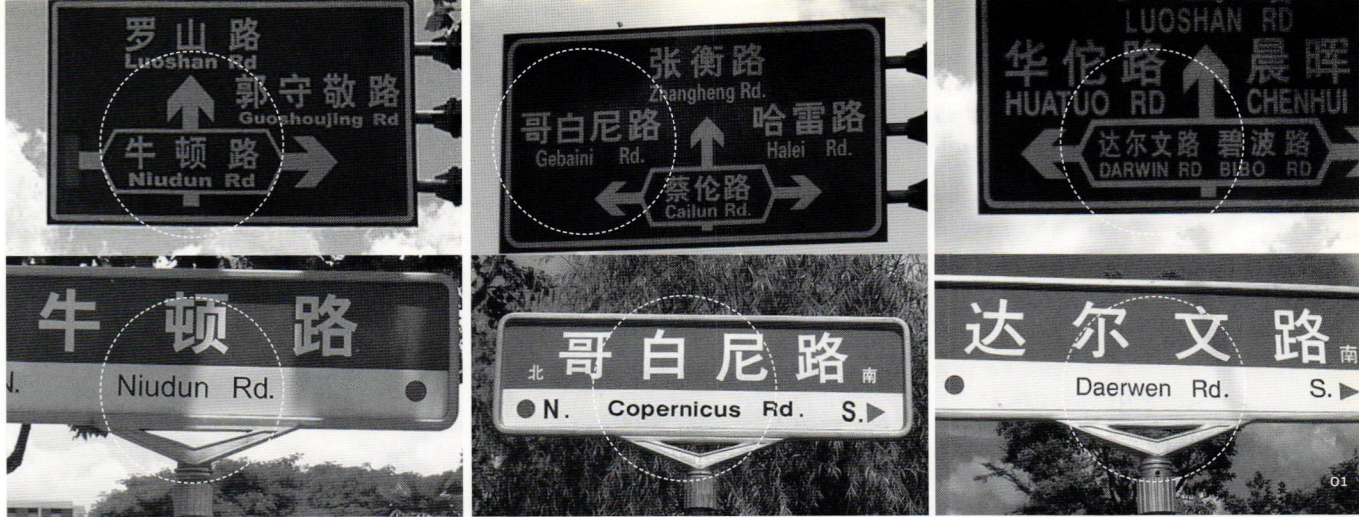
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From the perspective of contemporary China, it appears that almost everything one can imagine outside the culture is translatable, transformable, and copyable. But it is not so simple: the case of Zhangjiang Hi-Tech Park (otherwise known as “China’s Silicon Valley”) in Shanghai, Pudong reveals a complex and multi-dimensional layering of international influence and innately Chinese traditions and politics.¹ Begun several years ago on a site formerly occupied by farms, the naming of the streets was immediately problematic. It was clearly unlikely that the developers would use a traditional system of names; in Pudong, one finds street names like *Lannidu Lu* (Road Muddy Ferry), *Shangzhu Long* (Alley Slaughter Pig), and *Laji Tang* (Garbage Pond), all reflecting the rough state of the area’s agricultural past.² The new street names had instead to represent the “new China” and to signal the global ambition behind the creation of China’s biggest free trade district, the Waigaoqiao Free Trade Zone. Should the streets be named after world famous harbors and tax-free districts like Rotterdam, Yokohama, and Alexandria? Or should they rather be named after scientists, Chinese and foreign alike, such as Newton, Einstein, Zhang Heng³ and Zu Chongzhi?⁴ Such appropriation of both Western and Eastern history is one way in which China’s dream of globalization and modernization has approached fruition.

The deployment of scientific names on the streets of Zhangjiang was far from arbitrary. Chinese name are on east-west streets, whereas foreign (western) names are on north-south streets. There are ten Chinese scientists represented, ranging from the 2nd Century BC to 20th Century AD, along with ten western counterparts ranging from the 15th to 20th Century AD (including Lake Nobel). The Chinese chronological range is almost four times longer than that of the foreigners, and there are only two Chinese scientists named from the time period covered by the foreign ones. Clearly the intention is to show the longevity of Chinese science, but in so doing, it also reveals the inadequacies of Chinese science in recent centuries. The Chinese scientists also dominate the naming system in terms of street width and total length: China comprises three times the length of the west.

There is still another layer to this naming system. Each sign for a street name in Chinese has an “English” counterpart on the same board—if we can call it English, since the alphabetization of the names is far from standardized. Sometimes the alphabet letters in the green signs on the street are identical to those in the blue signs for drivers hanging above the street crossings, while sometimes they differ. Three standards emerge [fig.1]:

1. Hanyu Pinyin (Chinese pronunciation) coherence, e.g. Niudun Rd (for Newton Rd) and Halei Rd (for Halley Rd) in both green and blue;
2. Hanyu Pinyin above the crossing and English on the street, e.g. Jialilue (for Galileo) Rd in blue and Galileo in green;
3. Hanyu Pinyin on the street and English above the crossing, e.g. Daerwen (for Darwin) Rd in green and Darwin in blue.



Standard 1: Newton versus Niudun

Standard 2: Copernicus versus Gebaini

Standard 3: Darwin versus Daerwen

The lack of a fourth standard, in which the pair of signs are coherently English, demonstrates that legibility for foreigners is relatively unimportant. It is obvious and understandable that Chinese is dominant in such circumstance, and that English is a type of accessory; and yet, the naming system of signs on the street doesn't match that of those above the crossing, nor that of the consistent Chinese pronunciations showed on Zhangjiang's official English website.⁵ So which one is real, or which one is more standard?

This heterology of syntactical systems has nothing to do with English or Chinese pronunciation (or even the evocation of real people and events) but rather with the fact that Chinese-English relations, in matters of both language and culture, are quite complicated; in a sense, this language confusion brings out—and perhaps even provokes—deep-seated cultural confusions. If I am a foreigner driving a car in this science park and don't know any Chinese characters, how can I read the street? By which standard? What if I am walking on the street, trying to find an address? Conversely, if identifiable globalization is unimportant, why doesn't Zhangjiang simply use Chinese characters along with Pinyin (Chinese pronunciation) rather than mixing up Pinyin and English? The words of Baudrillard come to mind: "The whole system becomes weightless, it is no longer anything but a gigantic simulacrum—not unreal, but a simulacrum, never again exchanging for what is real, but exchanging in itself, in an uninterrupted circuit without reference or circumference."⁶

The Zhangjiang Hi-Tech Park is, of course, only one extreme version of a larger trend in Chinese design. Take, for example, the façade of the Fanchengda Food Store [fig.4], located on Nanjing Road, a famous commercial street in Shanghai. During the store's renovation in 2004, the scaffolding was covered by a huge printed image showing a rendered perspective of the future building (while the existing store remained open). The entrance in the printed rendering and the physical entrance overlapped, although because the building was situated in a curved corner, the two-point perspective (rather than 2-D façade im-

age) appeared distorted. The signage was oddly doubled; one marquee was printed on the rendering while the other punctured the rendering, jutting halfway into view. The use of a perspectival image on a flat street front indicates an only partial understanding and awareness of western *trompe-l'œil* painting in urban contexts [fig.5]. The distance between physical reality and imagination approaches zero—a distinctly Chinese dilemma and invention. There is no homology between image-maker and image-user at all; the user has the right to adjust its value. In Chinese paintings from the 17th and 18th centuries, linear perspective was used for the building and furniture, which were treated as formal objects and could be constructed with geometrical precision, while the human figures and landscape were treated as informal objects that could only be painted with traditional Chinese techniques—shadow and non-shadow coexisting on the same object. Today, precision and rationality still cannot eliminate this characteristic overlapping of realities.

The same is true at Zhangjiang; at several crossings, large marketing posters obscure the construction behind [fig.2]. In one, a young lady in a white dress leans against on a golden picture frame that shows high rise housing and endless grassland in the distance. But behind the poster are standard, mid-rise residential buildings built in 1980's and '90s. What is the difference if within the dream world of Zhangjiang there is yet another dream to dwell in?

Maps of Zhangjiang's "Silicon and Pharmaceutical Valley" [fig.3] take this dream still further; showing the numerous logos of high-tech institutions, this map attempts to imitate the maps of the original Silicon Valley that show the logos and messages of leading companies. The website of the company that designs this map states, revealingly, that "Silicon Valley isn't so much a place as it is an idea. More than any specific landmark or point of geography, Silicon Valley is identified with the spirit of innovation—a frontier of limitless possibilities that beckon the bold."⁷ Although it is called "not just a place", the companies in California's Silicon Valley can nevertheless be roughly located on the iconically distorted aerial map that includes cars, hot air balloons, and

seagulls, as though drawn for a vacation resort; in recent years, the cartographic technique of such maps technique increasingly eschews this style in favor of the more technological aesthetic of Google Earth. At Zhangjiang, however, the latent geography that one would have found in the Silicon Valley maps is removed and icons are placed at random, floating above the proportioned map. One is left with only “an idea”; capitalism is here removed from context. It is thus none too difficult to understand why there are so many overlapping systems for naming streets; it is all idea, if you will, a heterology rather than a homology.

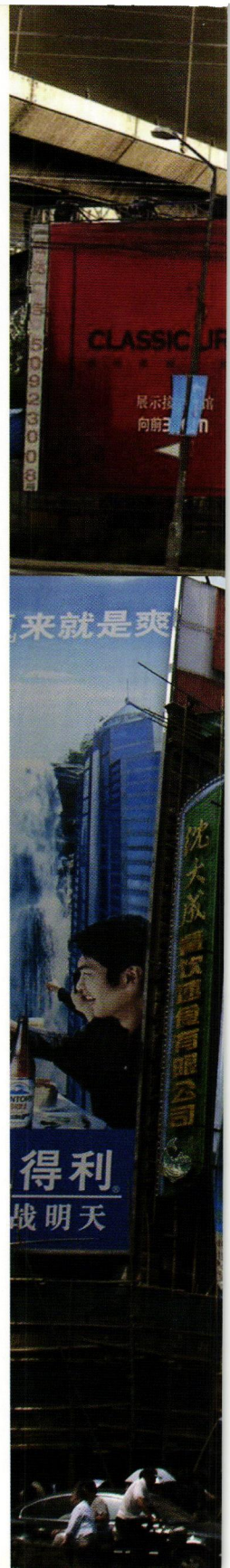
Let us return to the question of naming. Throughout the technologized world, the phrase “Silicon Valley” conjures up a pop-culture wonderland of microchips and moxie, which lands squarely on the word “Silicon”: no “Silicon Wannabe” (Seattle), Silicon Alley (New York), Silicon Hills (Austin, Texas), Silicon Island (Taiwan), Silicon Plateau (Bangalore), Silicon Corridor (Malaysia), Silicon Wadi (Israel), Silicon Fen (Cambridge, England), and so on.⁸ On the other hand, when this high-tech wonderland lands in China, it shifts literally back to “Valley” (Chinese: Gu), e.g. *Guang Gu* (Light Valley, Wuhan, Hubei Province) and *Na Mi Gu* (Nanometer Valley, Shanghai, Fujian, Shenyang, etc). Of course, none of these places are “valleys” at all; Zhangjiang was, after all, flat farmland, but for the sake of Hi-Tech (IC, software, and biomedicine industry), it was semantically transformed.⁹

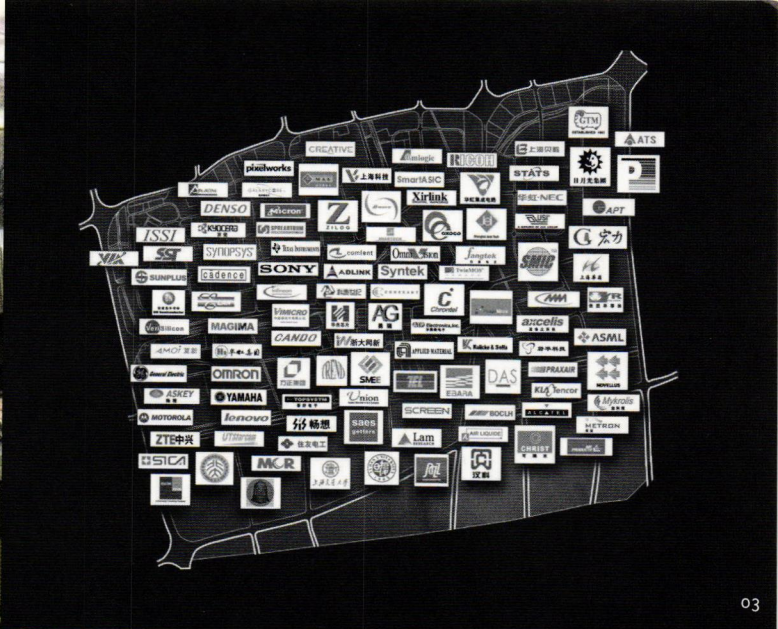
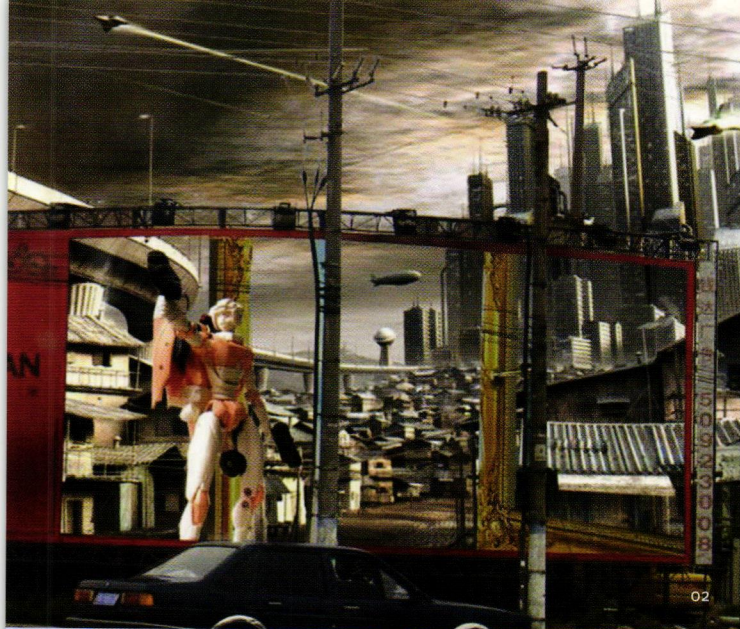
Zhangjiang is thus a multi-dimensional space that could not happen in any other culture, an abstract symbol and a territorial container full of heterologous dreams and crossovers of technology, imagination, cultural tradition, sociality, and perhaps above all, language: a hyperreal simulacrum that attempts to create a new assumed “reality”. In a propaganda DVD that extols the potential of this new Hi-Tech park, a young engineer stands in a metro train, eyes shining, and says “Our dreams are in Zhangjiang!” And indeed, Zhangjiang is itself a dream (or many dreams), a dream-valley, one of many in contemporary China.

Endnotes

1. This research is part of an urban study undertaken along with the exhibition *City In Progress / Live From Zhangjiang* at Shanghai Art Gallery (Bund 3), Zhangjiang Art Museum, and Zhangjiang Hi-Tech Park. The exhibition—from September to December 2006—included indoor and outdoor exhibitions as well as three books and was done in collaboration with artists and architects from mainland China, Hong Kong, Taiwan, and Macao. This essay is previously partially published in *Domus* (Chinese Version) 01/2007, titled *Dream, Zhangjiang*, in Chinese.
2. Zhao Qizheng, *Pu Dong Xin Qu Di Ming Zhi [Record of Place Names in Pudong New District]*, (Shanghai, 1999).
3. Zhang Heng, (78-139) was an astronomer, mathematician, inventor, artist, poet, and literary scholar of the Eastern Han Dynasty in ancient China.
4. Zu, Chongzhi, (429-500) was a Chinese mathematician and astronomer of the Southern Dynasties.
5. <http://www.zjpark.com/>
6. Jean Baudrillard, *Simulations* (Semiotext[e], 1983), 11.
7. <http://www.siliconvalleymap.com/history.htm>
8. <http://www.silicongulf.net/?q=node/47>
9. The same goes for many governmental and courthouse buildings in China which are called “White House-like”, despite the fact that they are clearly “Capitol-like” in their neo-classical style. In the media, the phrase “White House” has much more exposure than “the Capitol”; thus, the White House is often inaccurately invoked by a public unaware of the exact meaning it carries.

Image credits: Figs. 1, 2, 4 and 5 courtesy of the author. Fig. 3 courtesy of Trestria, Inc.





Twin Logics: The Concurrence of Non-autonomous Identity

Lara Davis

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One image of 'divine' or first order, undifferentiated 'twins'—the so-called 'primal androgyne'—has been depicted as a conjoined or bisexual entity. The Greek Hermaphrodite (Hermes + Aphrodite) and Hindu deity, Ardhanarisvara (Shiva + Kali Ma), were said to have had bodies "female on the left side, male on the right side", or *coincidentia oppositorum* (coincidence/ opposition).¹ In Plato's "Symposium", Aristophanes gives a detailed oratory on the mythology of the original autonomous unity of the *three* sexes of humanity: the man, the woman and the hermaphrodite, each having "four hands, four legs, and two faces... identical in every way" before Zeus cut them in two. "Each of us is a mere fragment of a man (like half a tally-stick)", Plato wrote; "we've been split in two, like filleted plaice. We're all looking for our 'other half.'" ² This "tally-stick"—a Greek mnemonic device or a receipt of transaction, illegible when split—serves an interesting analogy for Plato's description of human experience as an existential search for one's twin autonomy. Re-constituting the memory of this two-which-was-one, the question of non-autonomous identity leaves something lacking, to be completed by an unknown and absent other.

While mythology has represented human twins as differentiated or inverse analogues of one another, often embodying and anthropomorphizing polarities of nature, the greatest myth is that such twin polarities are *equal* in their opposition.³ Biology, however, is rarely the engineer of equality. Beyond the typical classification of identical and fraternal twinning,⁴ there are several obscure, sometimes indistinguishable⁵ variations of the two that blur the tacit, biological constructions of the 'shared' and 'separate'.⁶ Though perhaps 25% of monozygotic twins are so called 'mirror twins', exhibiting reversed features including cowlings, birthmarks, and order in the appearance of baby teeth, the vast majority of twins experience asymmetry even in utero. Twin-to-twin transfusion syndrome is a very common occurrence, leading to the unbalanced distribution of nutrients from a singular, shared placenta and quite often one underdeveloped or malnourished twin at

birth. Gross asymmetry can lead to the loss of one twin, as is in the case of 'vanishing twins', an occurrence of astonishing statistics in which the dominance of one twin in early term is followed by the death and absorption of the other.⁷ The rarest conditions of all involve anomalies in zygotic division or fusion; in the case of chimerism, one discreet body contains two sets of distinct genetic material, while conjoined or parasitic twins are a literal, mutual incorporation from an incomplete split or a partial re-fusion of zygotes. Each of these types of twin present, in a manner of speaking, a chiral asymmetry: a 'left hand' and 'right hand' with variable degrees of categorical dominance and deficiency.

From biological to psychological asymmetry, the most profound risk is the trauma of loss in the case of death, suicide, or separation. Vanishing twin syndrome has been said to leave its biological mark, a physical deformation, or, more controversially, a sense of grief and mourning at the cenotaph, an empty tomb for an absent other. An aversion to gross imbalance may even trigger a transfer of burden from one twin to the other, as a physical, psychological, or psycho-somatic 'offering'. Freud's postulation that "the reminiscence [is a] somatic symptom rather than merely a psychological memory" is provocative here: is there a human capacity for a psycho-somatic or mnemonic recognition—a re-membering—of this other half of the proverbial tally-stick?⁸ May the memory of one twin be embedded or inscribed within the other?

Doubling/ Shared Logics

Twin logic is characterized primarily by this potential of a radical positioning of self as other.⁹ That which is doubled exhibits an implicit condition of sharing; thus, the divided singularity (autonomy) and the implicit, reciprocal sharing (non-autonomy) of the twin pair allows us to go beyond the dialectic of difference and sameness to address what Lyotard has called the "differend", the concurrence and mutual

embedding of the 'other'.¹⁰ From the obscure origin of a single identity, the twin must seek to define [one] self: what are the repercussions of always answering to two names, as though one is both subject and other, or conversely, to live as though one is 'one-half' of a singular identity? Twin logic is always twofold, never fixed to the singular strategies of one rule-set, but developed from the improvisational complexity of multiple, colliding and intertwining rule-sets. Twins are always already in the condition of departure, forever completing each others' (thus their own) sentences, embellishing each others' (thus their own) ideas, and interrogating themselves with meta-criticism in a clause of mutual identity. Their ego-[ec]centricism is marked by a *conditional* cycle of reciprocity and deferral, and a continual paradox of running from oneself– to oneself. Twin (doubling *thus* shared) logics constitute the dissolution of a singularly constructed identity. It establishes an alterity of identity through dynamic asymmetry and reciprocity, and provokes questions of a radical ethics in the limits of self-identity. The following Twin logics are suggestive spatial and perceptual models through which a twin praxis– a capacity for 'being other'– may be embodied.

The twins stand together before the mirror. They experience their difference and sameness as a perception of multiple– an experience of *increasing* multiplicity. The specular complexity of such mutual voyeurism is multiplied *ad nauseam*, creating a mutually safe conflation of fantasy and reality, a performative space of comparison where sameness or difference can be exaggerated theatrically. Twins of the same sex can 'become' the opposite sex or *vice versa*, through mimicry, inversion and a relative positioning of their bodies and identities with respect to the other. The act of differentiation is thus performed as a function of time, as twins emulate each other in the present, the past, and the future. The self and the other are extended and deterritorialized between the material plane, the specular plane, and the projective plane.

This specular reflexivity deconstructs the concept of ego. It creates a multiply-layered palimpsest of projection and self-effacement, as the perception of one is superimposed upon the other. The distinctions between subject/object and singular/multiple are softened in the space of the imaginary. What if we were to suddenly come to experience our mature lives as a foreigner, as if for the first time? What if we have– for our entire lives– lived the life of [an]other? It is, after all, an uncanny yet typical fantasy of the twin, that Twin A and Twin B, misidentified in infancy, are reared with identities transposed (*antistigmatis*– 'before branding'). The twins may meet themselves– through mutual transference and projection to an inchoate identity– in the speculative (specular) past or future, imagining and by *proxy* experiencing things which they have not singularly experienced.

The mirror space may thus constitute a *mise en abyme*, placing identity into infinity, into a virtual

abyss.¹¹ Yet for the twin, the 'mirror' is already incorporated, a spatialized, relational reflection of a three-dimensional twin body. In the twins' first confrontation of the specular surface, the logic or proof of geometrical symmetry follows a series of subjunctive clauses: if *I* am we, and we are two, then *which one* am I? Identity is thus first constituted by a *break*— not an associative *connection* as is in the case of the singleton— a shattering of the mirror and of autonomous unity, after which the mirror is always already shattered. And yet, twins remember— and still remain— 'one'. The twin then inhabits a lucid, reflective (reflexive) tele-zone in the spatially exploded mirror. It is an aporetic space— a temporal and spatial impasse— constituting both a gorge and a bridge forever between subject and other. A memory of a psychosomatic connection is projected, pre-inscribed into all existing subject/other relationships.

Offering an opportunity to establish an experimental and control group within a single set, the twin pair has historically provided a provocative research subject for developmental biologists, geneticists, and sociologists. Further, the typological distinctions identical and fraternal can themselves be assigned 'control' and 'experimental' status (respectively) to distill the influences in the classical enigma of 'nature' (genetic predisposition) versus 'nurture' (environmental conditioning). The use of twins in genetic research has raised an extensive and sometimes controversial array of questions regarding the pre-disposition or pre-determination of those things which may (or may not) be made to differentiate.¹² Where empirical stability is otherwise taken for granted, such doubled control groups call it into question. If both twins differentiate, from what criteria can differentiation be defined? What motivates the biological and psychological desire for differentiation, where are their limits, and is it reversible? Is there a changeable disposition of this 'same'— by virtue of twins' paradoxical 'polar opposition' and indistinguishability— in whose likeness the seeds of extreme difference reside?

The topos of twin polarization flattens the complexity of typical identity development in twins. One may be dominant and extroverted, the other shy and introverted, but quite often twins exhibit— ever so slowly— reversible differentiation and/or cyclical inversion in identity roles. We can image such an inversion as two traveling sound waves, which alternately diverge and synchronize, a tracing identity complex propelled by an identification with their twin 'other'. In one phase of life, they may exemplify polar identities, as the desire for difference can lead to choices or passive inclinations in physical characteristics such as hair, dress, and posture or social characteristics such as speech, socialization patterns, and sexual orientation. Yet a phase shift may occur, in which they may entrain or de-differentiate and seem physically and psychologically indistinguishable. They may enact a role— and thus a power— reversal, through which, doubled and inverted in time, they may exhibit both dominance and submission. This twin-tropos is reciprocal, and the acts of turning, taking turn, and sharing mark moments of identity involution; one may turn so far into oneself, to have turned to the other, into another 'self'. At the phase of greatest physical, psychological, or historiographic synchronization, twins— and un-

doubtedly their community— may experience a retrograde complex, an indistinction of departure and return like that of two rapidly oscillating sinusoidal frequencies. This recursive change produces a perception of time and space "out of phase".¹³

If the aforementioned logics regard twinning with respect to biological symmetry, the notion of the *doppelgänger* proposes a still more radical twinning with respect to the perceptual axis of space and time. This experience of a 'phantom twin', 'ghostly double' or 'absent other', may demonstrate twin logics through a spatio-temporal conflation, confusion, or deception of physical presence and identity. The *doppelgänger* (literally 'double-goer', a chronic delusion known as the 'syndrome of subjective doubles') is experienced as an uncanny sensation of self-image or a perceived displacement of one's body with respect to space or time.¹⁴ The perceptual manifestations vary from an isolated 'out-of-body experience' (e.g. glimpsing oneself in peripheral vision with no mirror, no shadow, or no reflection) to the conviction that one's exact 'double' is living out a life parallel to one's own. Such a radical spatio-temporal alterity— a displaced perception locus with respect to time ("time out-of-joint")¹⁵— is marked by the dissolution of discrete spatial contexts and the undermined assumption of "the spatial unity of self and body".¹⁶

The logics of projected subjecthood and composite identity address many of the same questions. Is it possible to see through another's eyes, to experience two positions at once? Is it possible to experience the radical assimilation of two similarly constituted individuals, a co-ownership of body and spirit, as the shared, fragmented and re-membered chiral handedness of Hermaphrodite? Does a "soliciting of emptiness" or an abysmal desire predispose the void between 'subject' and 'other' towards possession or dispossession, embodiment or disembodiment?¹⁷ Such identity projection provokes questions of responsibility for (one's) limits, a careful distinction of embedded and projected non-autonomy, in which desire can be uncoupled from perception.

Twin logic invokes a coincidence and opposition of identity, a non-dialectical embedding of the 'other'. Like the mnemonic 'tally-stick', the corporeal and incorporeal are constituted within in a temporo-spatial relationship, within which self and other are inseparable. This *clausal* nature of Twin logic— the mutual dependency of *presence* for closure— indicates that the other must bear witness for a thing to have occurred.¹⁸ Yet the non-autonomous individual— both one-half of two and two within— is a paradox of presence and absence, spatial distance and temporal immediacy. An impulse to turn to the other reverts to an *internal turn*: a "turn in— turn homeward" (*einkehrt*).¹⁹ Whether biological or perceptual, the experience of the phantom twin, a virtual contact with one's (other) self (*alteridem*) in an (other) time, produces a profound paradox of difference and sameness, presence and absence, within which can be found a vague recognition of self/future in the other.

Endnotes

The author is grateful for the patience and assistance of editor James Graham and (embedded) co-author Sara Davis.

1. Barbara Walker, *The Women's Encyclopedia of Myths and Secrets* (Edison, NJ: Castle Books, 1996), 54.
2. Plato, *Symposium and Phaedrus* (New York: Alfred A. Knopf, 2000), 191-d, 35.
3. Seen as a product of the symbolic fertility of nature in agrarian societies, and most often depicted as pairings of light and dark, morning and evening, spring and winter, sun and rain, "There is a widespread belief that twin children possess magical powers over nature, especially over rain and weather." Many of these anthropological studies have depicted twins with near messianic prophecy for justice and equity from difference, whose symbolic union, separation and fertility served as ritual offering for the dispensation, withholding and restoration of the water cycle. As an example, "The Hindus from the Central Provinces of India believe that a twin can save the crops from the ravages of hail and heavy rain if he will only paint his right buttock black and his left buttock some other color, and thus adorned go and stand in the direction of the wind." Sir James George Frazer, ed. Theodor H. Gaster, *The New Golden Bough: A New Abridgment of Sir James George Frazer's Classic Work* (New York: S.G. Phillips Inc., 1972), 39-40. The Dioscuri (or Heavenly Twins), Castor and Pollux latterly of the constellation Gemini, represented the morning and evening star respectively and had such power with respect to the invocation of the weather. The pastoral king Hercules and his twin were also said to be rain-makers and diviners of the thunderstorm. Robert Graves, *The White Goddess: A Historical Grammar of Poetic Myth* (New York: Farrar, Straus and Giroux, 1975), 125.
4. Identical (monozygotic) twins are result from a fertilized ovum (or zygote) which subsequently splits, resulting in two same-sexed fetuses with an 'identical' genome. Fraternal (di-zygotic) twins result from the simultaneous development of two separately fertilized ova, which carry different genetic information and may result in same or opposite-sexed twins.
5. The fetal membranes, the amnions and chorions, as well as the placenta may fuse in fraternal twins or separate in identical twins, depending upon the time of conception, splitting, and position of the zygote in utero. Nancy L. Segal, *Entwined Lives: Twins and What they Tell Us About Human Behavior* (New York: Dutton, 1999), 14.
6. 'Polar-body' (monozygotic) twins occur when one ovum is fertilized by two separate sperm, generating a twin pair only half-identical with respect to the maternal gene. One dizygotic type occurs when ovulation continues post-conception, resulting in a difference of fetal age and occasionally paternal gene (demonstrated in the case of the 'Salt & Pepper twins'). Segal, 41.
7. Arguably 30% of all twin pairs. Peter Pharoah, "What Vanishing Twins May be Telling Us", *Research Intelligence*, Issue 17 (University of Liverpool, August 2, 2003).
8. Cha Shepherdson, *Vital Signs: Nature, Culture, Psychoanalysis* (New York: Routledge, 2000), 5.
9. Luce Irigaray, "Volume and Fluidity", *Speculum of the Other Woman* (Ithaca, New York: Cornell University Press, 1985), 229.
10. Jean-François Lyotard, *The Differend: Phrases in Dispute* (Minneapolis, MN: University of Minnesota Press, 2002).
11. Lucien Dällenbach, *The Mirror in the Text* (Cambridge: Polity Press, 1989), 24.
12. Josef Mengele's extensive 'research' on twins in Nazi concentration camps betrayed the ethical limits of science in pursuit of the control of differentiation. Lucette Matalon Lagado, Sheila Cohn Dekel, *Children of the Flames: Dr. Josef Mengele and the Untold Story of the Twins of Auschwitz* (New York: Penguin Books, 1992).
13. Jacques Derrida, *Specters of Marx* (New York: Routledge, 1994), 32.
14. In "The Other", Borges meets his doppelgänger on a bench in Cambridge on the Charles River in 1969, as Borges meets his doppelgänger on a bench in Geneva on the Rhone in 1918: "My dream has lasted seventy years now," I said. "After all, there isn't a person alive who, upon waking, does not find himself with himself. It's what is happening to us now - except that we are two." Jorge Luis Borges, "The Other", *The Book of Sand* (New York: E.P. Dutton, 1978), 13.
15. Derrida, 32.
16. "[Out-of-body experiences] are related to a failure to integrate multisensory information from one's own body at the temporo-parietal junction (TPJ)". Olaf Blanke, "The Out-of-Body Experience: Disturbed Self-Processing at the Temporo-Parietal Junction", *The Neuroscientist* Vol. 11, No. 1 (2005) 16-24. Web: <http://nro.sagepub.com/cgi/content/abstract/11/1/16>. One might also consider the issue of quantum entanglement, introduced by Erwin Schrödinger, which indicates that "a physical property of a particle (or larger system) becomes instantly dependent on the properties that are being measured on another particle, regardless of how far apart the particles are." Terence G. Rudolph, "Quantum mechanics: The speed of instantly", *Nature* 454 (14 August 2008), 831-832.
17. Jean-François Lyotard, *The Inhuman: Reflections on Time* (Stanford, CA: Stanford University Press, 1991), 18.
18. The witness, according to Lyotard, involves "the coexistence of two secrets": "each knows something near oneself about the other... but neither can state it to anybody." He further proposes, "What is possible at the peak of communication would be a double agent." Lyotard, *The Differend*, 102.
19. Martin Heidegger, "The Turning", *The Question Concerning Technology and Other Essays* (New York: Harper Torchbooks, 1977), 41.

Programmed Emptiness: Research Infrastructure on the Tibetan Plateau

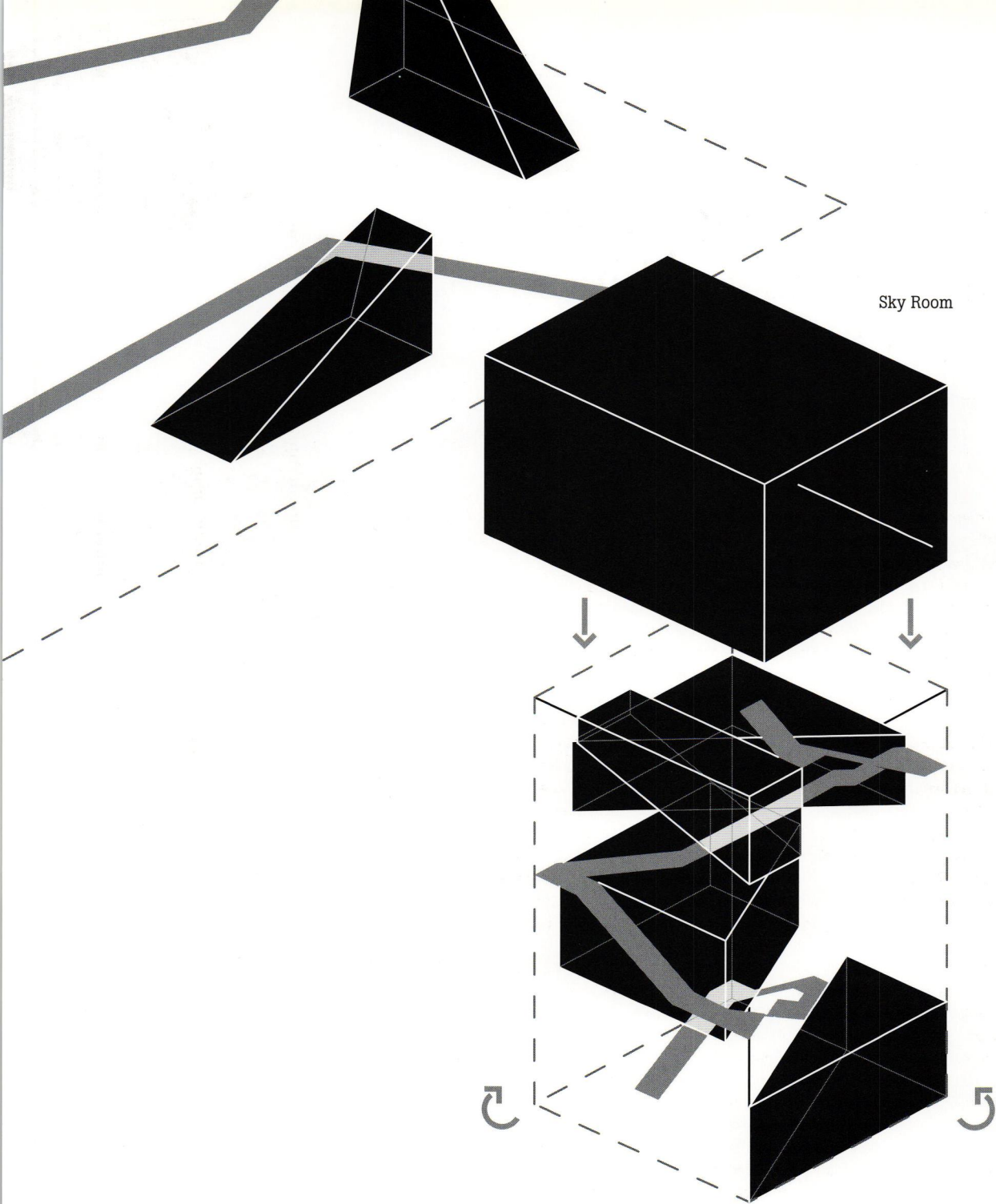
Sarah Dunbar

84

This recently completed thesis project is a design for a monastery and research institute sited in the Yangbajing Valley of the Tibetan Autonomous Region, 80 km northwest of Lhasa. The altitude - 4,000 meters above sea level - and the wide open space of the site are ideal for the research of gamma and cosmic rays, which require the deployment of large arrays of devices that detect the passage of these tiny particles through the earth's atmosphere. The coupling of metaphysical and cosmic studies in the same institute is intended to enable dialogue across disciplines; likewise, the construction of such an institute would require an international initiative, bringing a global and public architecture to the region and providing China with an opportunity to use this unique landscape for ends other than tourism or the extraction of resources.

While the landscape is marked and delineated from its surroundings by the placement of the research arrays, the architecture takes the form of monumental buildings that to mediate the open space through brute form and scale. The architecture draws on vernacular precedents, namely Tibet's forts and monasteries, for organizational and material inspiration. Tibet's Potala Palace (ca. 1645), its largest fort building and former home to its religious and political leader - the Dalai Lama - is now a tourist attraction, monitored and maintained by the Chinese government. Programmatically it is as varied as any medieval castle, with rooms of state, temples, living quarters, and a prison on the lower levels. Disparate volumes are accessed by labyrinthine paths that work their way through the structure, directing one's movement and ordering the experience of the building. This immense structure, seated on a hill in the Lhasa valley, rises a total of 1,000 feet above the valley floor and is over 1,000 feet wide; the perception of its mass is perhaps as visceral as the passage through it.

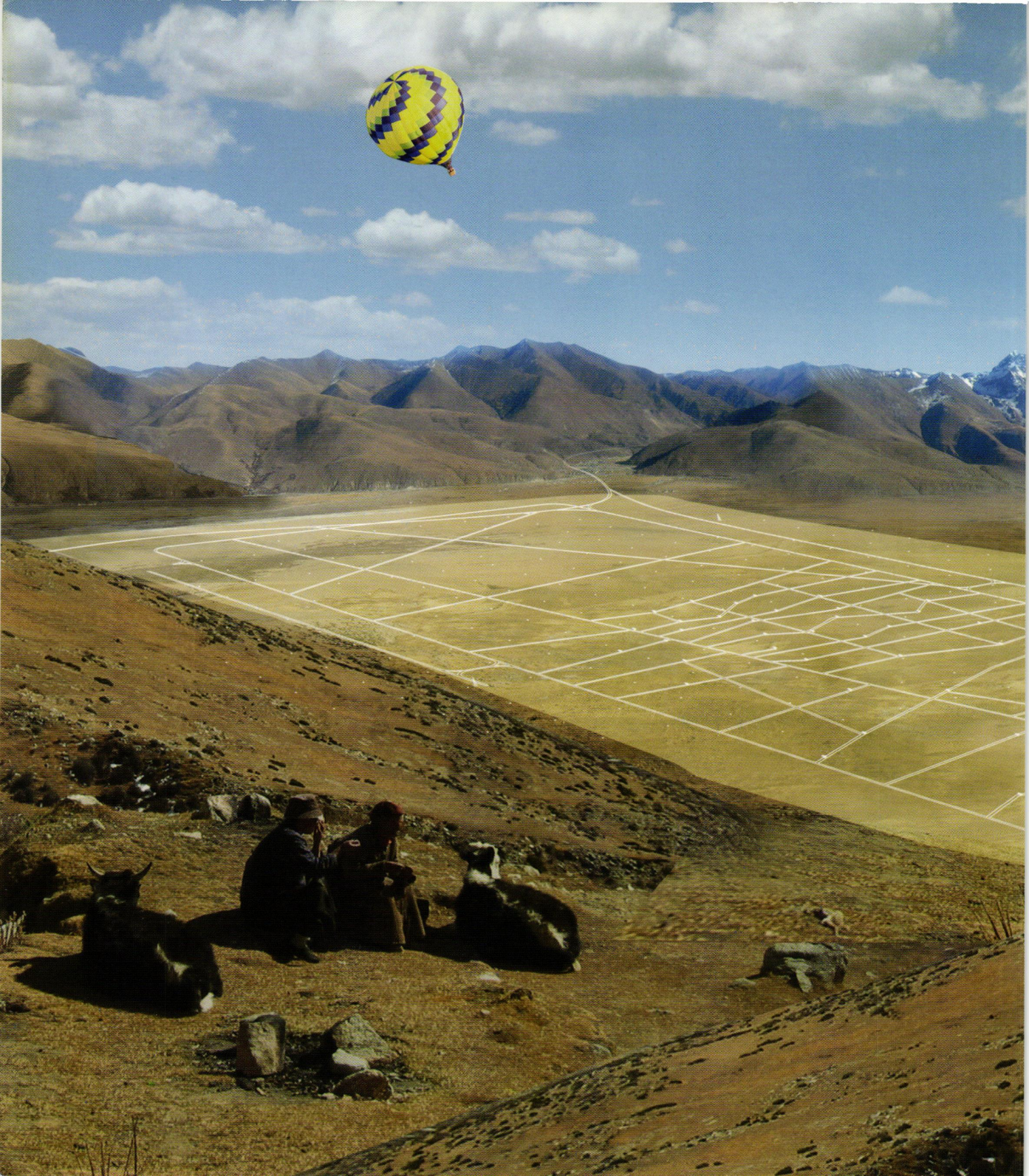
Though drawing on vernacular precedent, this thesis hopes to move away from the easy commodification of folk culture, a trend which is prevalent in Tibet today and an easy bedfellow with political repression. The proposed building and research infrastructure instead use built precedents and a reaction to Tibetan landscape to develop a mechanics of form suitable to the particular site. The proposed building, though massive, conceals and reveals vast emptiness within, organized by medieval path and modern cores with varying scales of publicness in its folded interiors. A network of roads links the research infrastructure with the architecture and with two major lines of transport which pass through the valley on the way to Lhasa; the Qinghai Tibet Highway and the Qingzang Railway. Unlike much of the peripheral program (military bases, nuclear testing grounds, secret prisons, mining, etc) which dots the Tibetan plateau, beyond the route of the tourist or even the public, the proposal makes this highly specialized program both accessible and visible; the architecture and landscape contrast the seeming invisibility of much of Tibet, serving as an act of delineation, or of difference that gives definition to its surroundings.

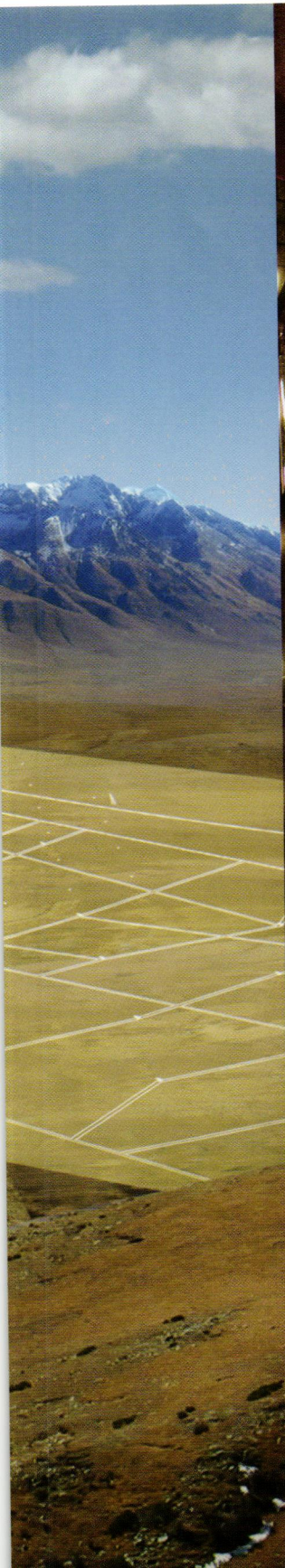


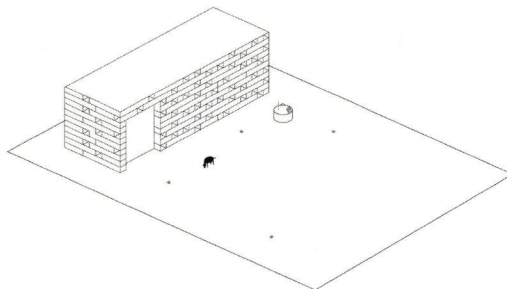
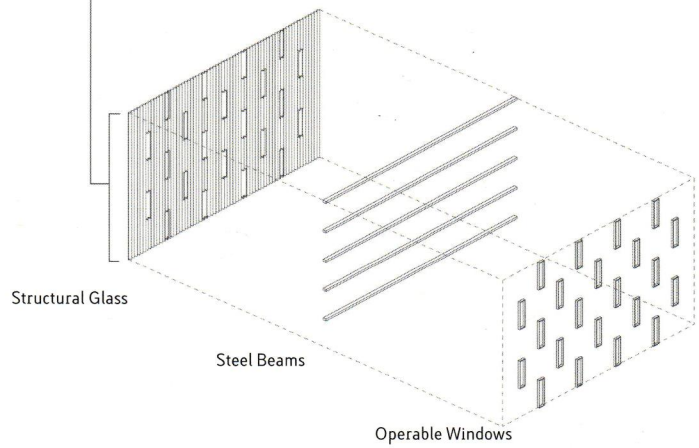
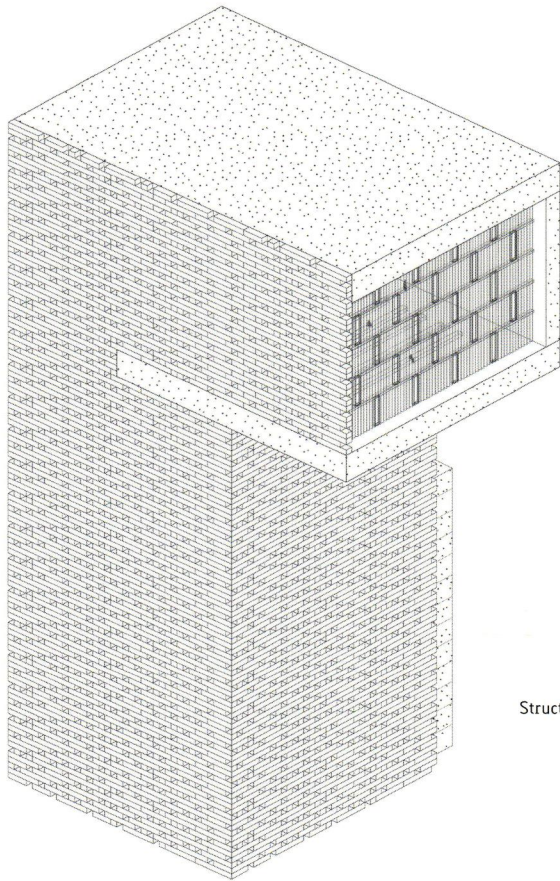
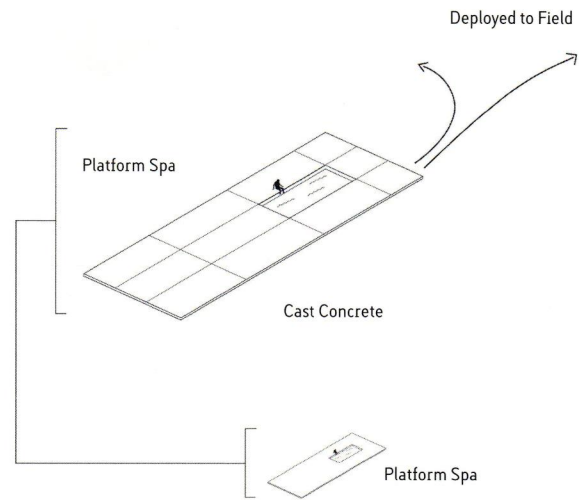
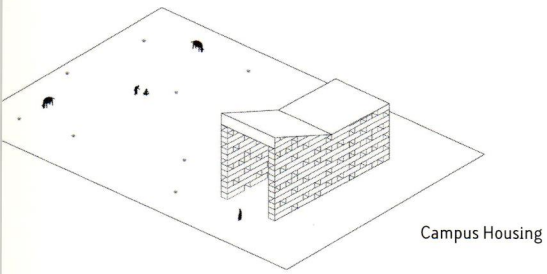
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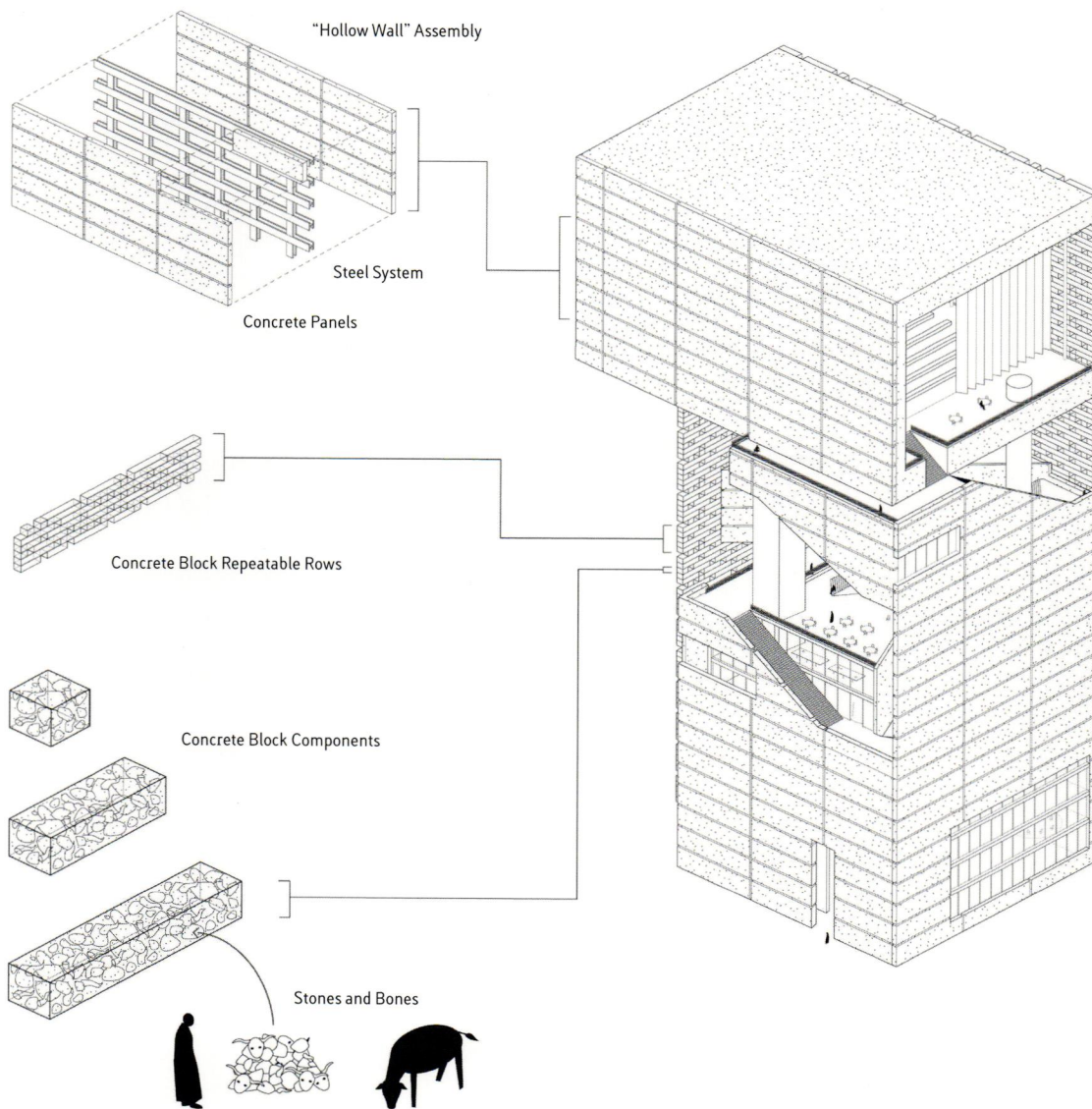
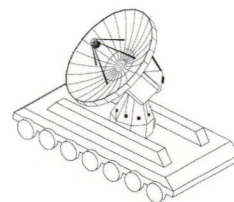
Field Folded

02









Roadside

Mark Jarzombek

03





Roadside Tange



Roadside Graves

Recasting the Castor: From *The Book of Beasts* to Albertus Magnus's *On Animals*

Melissa Lo

92

In *The Discarded Image*, C. S. Lewis tells his readers that medieval zoology was split into two opposing camps: one was what he calls the allegorical, “childish” description of animals in bestiaries based on the ancients, and the other was the “practical,” everyday observation of animals in the wild by hunters, trappers, and fishermen whose meals and medicines depended on first-hand animal knowledge.¹ Textual descriptions of animals proffered moral lessons; the animals of day-to-day experience and observation were food, sustenance, and sometimes medicine. Very rarely, Lewis emphasizes, did authors attempt to make the everyday animal the subject of a text.

The case of the medieval beaver, however, offers an alternative version of this story. The illustrated castor of the multi-authored, twelfth-century *Book of Beasts* fits into the first of Lewis’ categories well enough: it was certainly allegorical and its prophylactic use-value was based solely on ancient authority. But about two hundred years later, in his *On Animals* (*De Animalibus*), Albertus Magnus would weave careful observation and experienced use of the beaver with a reading (and debunking) of authoritative texts. Added to Albertus’ work was a new conception of what constituted and helped explain the universal. The author of the twelfth-century bestiary had abstracted a universal, moral lesson from one specific animal and its authoritative description, while Albertus identified the animal only with its particulars after he had devoted the earlier bulk of his text to the universal – i.e. the philosophical. So why this change in textual description, and why this divorce of the universal from the particular? My argument is that by the mid-thirteenth century, those who attempted to refine natural knowledge were committed to a new hierarchy of philosophy, reason, and particulars, helped in large part by Adelard of Bath’s earlier importing of ideas from Arabic scientists. And the changing description of the beaver – from bestiary to Albertus – provides a particularly illustrative reflection of the changed conception of what knowledge could do, an emerging schema for ordering it, and the kinds of knowledge worth recording.

Picturing Authorities

The authors of *The Book of Beasts* (12th c.) followed a conventional example of bestiaries that privileged ancient authorities and, more importantly, the word of God.² Thus, each animal description – including the description of the beaver – operates in two registers: as a description that relies on classical authority, and as one that uses this authority in order to abstract and illuminate a larger Christian principle. In the short entry on the beaver, the first paragraph serves as a textual description, relying on the *Physiologus*³ in order to explain the use of the beaver as well as the beaver’s behavior during the hunt:

This is an animal called CASTOR the Beaver, none more gentle, and his testicles make a capital medicine. For this reason, so Physiologus says, when he notices that he is being pursued by the hunter, he removes his own testicles with a bite, and casts them before the sportsman, and thus escapes by flight. What is more, if he should again happen to be chased by a second hunter, he lifts himself up and shows his members to him. And the latter, when he perceives the testicles to be missing, leaves the beaver alone.⁴

The Physiologus’ authority is not questioned; indeed, the text, by virtue of citing the *Physiologus*, further reinforces ancient expertise. Far from being forums for novelty, these texts were tools for promulgating and re-promulgating the knowing wisdom of a reliable authority.

But this authority and the information it provided also service a higher authority: God. For example, the *Physiologus*’ description of the beaver quickly feeds into a larger, allegorical portrait of the animal: “Hence every man who inclines toward the commandment of God and who wants to live chastely, must cut off from himself all vices, all motions of lewdness, and must cast them from him in the Devil’s face.”⁵ The use of the beaver is not just that its “testicles make a capital medicine,”⁶ but that the beaver’s behavior—and its presence on the earth—bears out a larger, more important lesson of chastity and vicelessness. This higher understanding, almost a decoding of nature’s creatures in order to better

identify the attributes of the righteous man, serves as a kind of spiritual knowledge that facilitates the ability to see the world – and God’s creatures – with a religiously conscientious lens.

The final sentence, explaining the name of the beaver, is yet another short reminder of this lesson, synthesizing both the authoritative description and moral lesson: “The creature is called a Beaver (Castor) because of the castration”.⁷ In this etymological anecdote, the ambiguity of the phrase “the castration” amalgamates the object lesson that the beaver is meant to serve. Is the reader meant to only think of the beaver’s castration when the animal is being hunted? Or, perhaps, to think of the goodly religious significance for man of his similar casting off of sin? The questions bounce off of one another, creating a loaded feedback loop; this circular double entendre suggests that the reader is meant to think of both.

Indeed, the feedback loop of these two kinds of knowledge also activates the entry’s accompanying illustration [fig.1]. The illustration is more than a simple description of the beaver’s physical traits; it is a redoubled explanation of the interaction and relationship of man to beaver. Circumscribed as a ribbed medallion apart from the rest of the page, the picture features a group of beaver hunters and a friar, and, at the center, a young gentleman who has pierced the representative castor. The deep stab of the pike, skewering the beaver from one side to the other, has been so effective that the animal’s testicles easily spring forth from its body, towards the foot of the valiant hunter. The moment could be triumphant, for the band of men has acquired the means with which to make the vague *Physiologus*-approved prophylactic. But the mutual gaze between the hunter and the beaver suggests little elation. The hunter’s expression mirrors precisely the enfeebled beaver’s. The brows, eyes, and lips of both soldier and castor droop downwards; and as their eyes lock, the hunter and beaver commiserate with one another: the beaver’s castration and the soldier’s chastity are intertwined. The scene is made all the more poignant because the Devil – to whose face a chaste man throws all his vices – is nowhere to be seen, and the man’s reward for such sacrifice has not materialized. And yet, the text consumes the image with this larger, instructive charge. Circumventing experience (and even the reader’s experience of the image), the text, and its reliance on authority, reinforces the larger, universal, God-given knowledge that such animals can help illuminate.

Importing Reason

At about the same time as the *Book of Beasts* and other bestiaries like it were being produced, Adelard of Bath was writing his *Natural Questions* (12th c.), a very different sort of text. Schools of learning had emerged and clustered in major cities in Western Europe, but Adelard was eager for more kinds of knowledge elsewhere. He decided to travel to the Arab world – Syria, Palestine, and Spain, most likely – and, while there, was exposed to new tools for thinking about nature. Upon his return to England in 1126, he was set to launch an emphatic argument: reason, first and foremost, could explain the natural world.⁸

In *Natural Questions*, he is careful to recognize that God is surely the Creator of all things, but he also makes clear that God is not the

only explanation for the immediate processes of nature: “I take nothing away from God, for whatever exists is from Him and because of Him. But the natural order does not exist confusedly and without rational arrangement, and human reason should be listened to concerning these things it treats of. But when it completely fails, then the matter should be referred to God.”⁹ Adelard prizes reason above all else for explaining the natural order, and deems it the most philosophical of explanatory mechanisms. He does recognize, however, that even reason has its maximum limits. Only at these limits, and as a last resort, can God be invoked again. Subsequently, in his hierarchy of explanation (and knowledge-making), allegories that abstract religious conscientiousness from the natural world explain very little. Instead, godly intentions are given secondary status, for another mechanism is in play: “For if reason were not the universal judge, it would have been given to each of us in vain.”¹⁰ Reason has now become the universal instrument of choice for knowing the world.

And it is the exercise of this universal capability to reason that is worth parchment and ink. Adelard is quite frustrated with those who have indiscriminately relied on ancient authorities, wasting paper along the way: “Whence some men, usurping the name of authority for themselves, have employed great license in writing to such an extent that they do not hesitate to present the false as true to such animal-like men. For why not fill up sheets of paper, and why not write on the back too, when you usually have such readers today who require no rational explanation and put their trust only in the ancient name of a title?”¹¹ Adelard’s exasperation seethes from his pages. Beyond the gripes and complaints, the structure of his own book sets an example for writing reason and out-writing authority. Though it is somewhat modeled on the dialogues of ancient Greek philosophers (Plato’s use of the Socratic dialogue, in particular), Adelard uses this form to showcase reasoning.¹² With very different aims than the encyclopedic nature of the bestiary, this question-and-answer session features his “nephew” who poses questions and explanations while relying on authority, subsequently leaving the field wide open for Adelard swoop in with reason to reveal the true explanations for things along with those better, more reasonable tactics for investigating nature. After his nephew asks why humans lack horns, Adelard responds: “In order to establish that your question is worth answering, you must first bring forth some true or likely reason why it seems they ought to have them. Otherwise such a question does not merit discussion among philosophers.”¹³ In effect, the text becomes an instruction manual for how a newly enlightened reader might go about writing his own philosophical text, and, more importantly, a directive for how to go about asking questions and providing answers for the natural world. The act of theorizing is a product of reason in the service of philosophy, and the particular specimen and specific species have been suppressed in order to best answer the question. The cataloguing impulse of the bestiary has fallen away to make more room for the reasonable practice of philosophy.

Beavers, in Particular

One hundred years after Adelard’s *Natural Questions*, when university-ensconced Albertus Magnus wrote his *De Animalibus* (c. 1256-1260), he, like Adelard, continued to uphold the tenets of reason for exploring nature, critiquing any exclusive reliance on textual authority along



the way. But he also included a revamped catalogue of particular animals at the back of his book. This new systematic and alphabetized directory could only be appended to a thoroughly reasoned, philosophical dissection of parts, structures, and various kinds of animals and their habitats; only after philosophical theorizing could he move back to the particular features of each animal.¹⁵ Thus, in Albertus' catalogue of quadrupeds, the beaver reemerges as a living, highly social creature, with an aptitude for building itself rather elaborate houses. The animal has been recast such that its moral implications are nowhere to be found and universal truths have been scrapped from the description. Instead, because the universal—i.e. reason-based and philosophical—categories and conditions for such species as the beaver have already been discussed in previous books of *De Animalibus*, the castor's physical and sociological traits can be emphasized along with its use as a human prophylactic.

Unlike the bestiary, Albertus' description does not include an illustration, but, rather, relies on colorful language derived from experience. He outfits the description with such specifics as "goose-like hind feet for swimming and forefeet like a dog," an "ash-colored [hide], inclining toward black" and "thick, short hair," creating a tactile, experienced-based version of the beaver.¹⁶ And in describing how the animal goes about his livelihood, Albertus evidences something close to admiration, describing the *ars*-like industriousness of his subject:

With its teeth, this animal fells trees of considerable size and constructs dwellings... He makes these dwellings two-chambered or three-chambered with terraces, so that when the water rises or falls he can ascend or descend. It is said that in gathering the trees for such structures beavers from many parts come together for [common] service and lie on their backs with the trees properly placed between their feet, and by means of their tails they diligently pull the trees over their bellies to the place of construction.¹⁷

Albertus transmits to his reader a very specifically observed por-

trait of the creature's habitat, its habits, and its physiognomy.

Much in the vein of Adelard, authority creeps in only to be corrected by observation and experience. In his only mention of an authority by name, Albertus gently blames Isidore of Seville for perpetuating of the myth of the beaver's self-castration: "He is called castor from castrating – not because he castrates himself, as Isidore [of Seville] says, but because he especially seeks castration."¹⁸ While the bedrock reliability of Isidore's authority has diminished, Isidore has not slipped into oblivion. And yet, something has taken the place of Isidore's authority: a hefty dose of observation and experience. Albertus does not necessarily cite his own experience (he never uses the first person) but he writes with such specificity that his reader is led to believe that experience has identified the beaver's secretions as prophylactic and – now, having moved very far from the bestiary's notion of chastity – as a form of medieval Viagra.¹⁹ Additionally, the bestiary's vague reference to the *Physiologus* has been supplemented with warnings derived from practical experience: "However, if mottled, inking toward blackness, [the casteorum] is poisonous and sometimes kills on the same day and sometimes transforms to another terrible sickness."²⁰ The beaver's medicinal benefits cannot just be taken for granted; they must be confirmed or corrected by experience in (and of) the natural world.

In other words, the knowledge that Albertus' beaver produces is a knowledge only of particulars. Unlike the twelfth-century bestiary beaver whose behavior could be transmuted into an abstract moral and spiritual message, Albertus' castor has a very particular way of living in the world and serves very particular human uses. Although Albertus implies that in order to know an animal, one must observe it and observe it again, beyond such observation (and the creature's prophylactic elixir) Albertus' beaver has no universal lesson to offer. Observations only stand to supplement the philosophical investigations that Albertus has laid out elsewhere. In the end, reasonable philosophers cannot simply hinge their tracts about the world on specific creatures. But these observations of particulars – of beavers and other beasts – can still find their way into such texts.

Endnotes

1. C. S. Lewis, *The Discarded Image* (Cambridge: Cambridge University Press, 1964), 146-152.
2. For more examples of the medieval bestiary, please see: Debra Hassig, ed. *The Mark of the Beast: The Medieval Bestiary in Art, Life, and Literature* (New York: Garland Publishing, Inc. 1999) and Wilma George and Brunsdon Yapp, *The Naming of the Beasts: Natural History in the Medieval Bestiary* (London: Duckworth, 1991).
3. The author(s?) of *The Book of Beasts* refers to "Physiologus" as an author, rather than a text. Lewis is particularly helpful for untangling the *Physiologus* misunderstanding: Lewis, 150.
4. *The Book of Beasts*, trans. T. H. White (Madison: University of Wisconsin Libraries, 2002), 28-29.
5. *Ibid.*, 29.
6. These much sought-after "testicles" were in fact external glands found on both male and female beavers. The medicine referred to was castoreum, an oil produced in these glands. Translator's Notes, *Beasts*, 29.
7. *Beasts*, 29.
8. Richard C. Dales, "Science and the Culture of Early Europe," *The Scientific Achievement of the Middle Ages*, ed. Richard Dales (Philadelphia: University of Pennsylvania Press, 1973), 2.
9. Adelard of Bath, Selections from *Natural Questions*, trans. Richard Dales, *The Scientific Achievement of the Middle Ages*, ed. Richard Dales (Philadelphia: University of Pennsylvania Press, 1973), 40.
10. *Ibid.*, 41.
11. *Ibid.*
12. For more on the Socratic dialogue, see: Charles Kahn, *Plato and the Socratic Dialogue* (Cambridge: Cambridge University Press, 1998).
13. Adelard, *op. cit.* 43.
14. *Ibid.*, 42.
15. While there are some versions of the *Zoologica* that are not alphabetized, there are versions of the manuscript in which scholastics have, indeed, put the animals in alphabetic, Latinized order. Albertus Magnus, *On Animals: A Medieval Summa Zoologica*, vol. 2, trans. Kenneth F. Kitchell Jr. and Irvn Michael Resnik (Baltimore, MD: The Johns Hopkins University Press, 1999), 1467-1469.
16. Although, apart from illustration, Albertus did seem to believe that there was a connection between nature and art, even if he did not provide an illustration: "...Albertus Magnus thought it unsurprising that nature's works should resemble and often surpass in craftsmanship those of art: art and nature after all formed objects by the same processes." Lorraine Daston, "Nature Pains," *Iconoclasm*, ed. Bruno Latour and Peter Weibel (Cambridge, MA: MIT Press, 2002), 136-138.
17. Albertus Magnus, *On Animals*, trans. Edward Grant, ed. *A Source Book of Medieval Science* (Cambridge, MA: Harvard University Press, 1974), 654-655.
18. *Ibid.*, 654. C. S. Lewis, in fact, praises Isidore for his acute observations, and his ability to connect such observations to everyday life.
19. "In childbirth, after the bleeding of the saphena vein, which is a vein coming from the liver into the lower part of the arm, and after having drunk it with an aromatic herb and two ounces of honey water, it easily expels the fetus and afterbirth; it also readily produces menstruation, because if the vein is not bled, it would have little effect. After it has been drunk in this way, it also causes men's testicles to be aroused." *Ibid.*, 655.
20. This rich description is also what makes the rest of the tract seem so morbid, certainly for a modern reader: elaborating on the productive, furry engineer only results in the animal's death and, ultimately, its reduction to useful parts, liquids, and odors. The human use of the beaver - for "tremors... and paralysis," "[i]n child birth" and for "arous[al]" - trumps all. *Ibid.*, 655.

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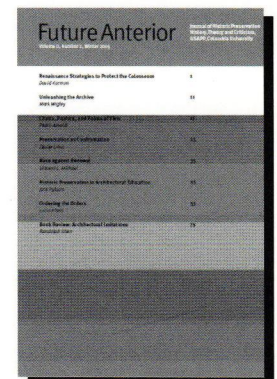
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