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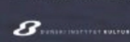

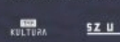

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Editorial – “Architecture as Intangible Infrastructure,” Issue Two

More than ever, architects today are called upon to build gestural landmarks and grandiose signature buildings. But architecture was never only about building. It is also about the flows of people, information, and resources that shape space. Today, the practice of architecture often confronts situations where these flows cannot be reduced to modernist managerial approaches to systematizing, structuring, and mastering the potentials of space.

In a two-part “Architecture as Intangible Infrastructure” issue of *e-flux journal* edited together with Nikolaus Hirsch, the intangible and immaterial flows that today appear to exceed the language of building proper are shown by a number of architects to be made not only of space, but also of information. The first issue of “Architecture as Intangible Infrastructure” last April featured essays by Justin McGuirk on the smart home as the site where companies are jockeying for control over the protocols that will data-mine domestic life; Eyal Weizman on the negative spaces created (or used) by warfare that become primary material witnesses after the destruction of buildings and societies; and Keller Easterling on the information carried in space and in the architect’s mindfulness, and how they already supersede the promises of technology’s universal transcendentalism to make architecture dance to immaterial instructions.

Crucially, these flows of information cannot be reduced to a technological apparatus or a simple update of modern architecture’s formalism to include new technologies, as architecture’s craze for parametric modeling in the 1980s and ’90s promised to do. The new computational tools and calculating power of this period seemed to provide the means of designing outrageous buildings at incredible speed, but which would actually stand up in real space as well. The new technologies of today, however, seem to reveal the opposite: a new impossibility of building, either due to the ethical transgressions of clients (or architects themselves) or to the sheer scale of humanitarian need, both of which the traditional field of architecture proper seems unprepared to address. It is actually through ethical, historical, economic, and social apparatuses that today’s information flows are placing the greatest stresses on the formal language that architects have been trained in. The question then becomes whether this language can remain relevant in designing spectacular parametric signposts for concentrations of heritage, capital, and tourism.

In this issue, Andrew Herscher asks how architects can approach the question of emergency housing when flows of refugees are fed into housing markets faster than provisional shelters can be built. Sold under the auspices of

1
Annunciation by John Hejduk, taken from *Such Places as Memory: Poems 1953 1996* (Cambridge, MA: MIT Press, 1998).

Waxed bannisters
Pinioned the entry
Impregnation was complete
Joseph wept"[1]

×

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Shumon Basar *lives in Berlin. He is coauthor of* The Age of Earthquakes: A Guide to the Extreme Present, *with Douglas Coupland and Hans Ulrich Obrist. He is also a member of the Fondazione Prada's Thought Council in Milan and directs the live-magazine* Format *at the Architectural Association, London.*

what Herscher terms "digital shelter," the replacement of housing solutions with credit takes for granted that a network of market demand can stretch to provide even emergency relief to the most disenfranchised. For Jorge Otero-Pailos, "monumentaries" architecturally combine the performativity of fiction with the fidelity of documentary. When faced with the anachronistic and often contradictory task of narrating a historical monument or heritage site, preservation design can only create entirely new theaters for staging memory.

WBYA? (Who Builds Your Architecture?) maps the convergence of human rights issues with processes of architectural design and construction logistics by tracing the drafting and fabrication of a steel truss as it approaches a construction site to meet the migrant workers who also travel from abroad to install it. Artist Taryn Simon's image essay documents objects taken or removed by workers from the construction site of Frank Gehry's building for the Fondation Louis Vuitton in Paris. And Beatriz Colomina looks at the influence of Wilhelm Conrad Röntgen's X-ray technology and the unwritten story of its influence over an era of early modernist avant-gardes captivated by the spatial promises of a shadowy screen that could peer through matter. If technological advances often transform the function and perception of space much in the way that X-ray technology's heretical transparency created the prospect of a world of pure visibility – through walls, people, and materials – then it also rearranges spaces formerly considered to be inside or outside. Suddenly everything and everyone is included, and everything and everyone is excluded. The distinction becomes impossible to manage.

Beatriz Colomina

X-Screens: Röntgen Architecture

When Wilhelm Conrad Röntgen first published his very recent discovery of the X-ray in December of 1895 in an article entitled "On a New Kind of Rays, a Preliminary Communication," he wrote about a new form of transparency in which "bodies behave to the X-rays as turbid media to light."[1] The invisible rays are described as a "medium" that penetrates objects and is revealed on screens. A floating technical surface acts as the most intimate witness of the otherwise hidden interior. An architecture is established that inverts the classical relationship between inside and outside, an architecture we still live in today, with our countless screens monitoring endless invisible flows. Architects, historians, and theorists quickly absorbed the new paradigm – developing an entire logic of the invisible in the early decades of the twentieth century that remains largely in place. New medical screens are today creating new forms of architecture as the relationship between inside and outside passes through another twist. New forms of intimacy are emerging.

Even before he mentions X-rays, Röntgen describes in the second paragraph of his paper a new concept of transparency closely linked to the idea of a "screen." The screen is actually made of a piece of paper coated with a thin layer of "barium platinum cyanide" that glows fluorescent when exposed to the rays. He marvels at the fact that paper itself is very transparent when seen through such a "fluorescent screen," so the screen is really just the thin layer of barium platinum cyanide. But it is not just a sheet of paper that is transparent. Even a thousand-page book placed behind the screen becomes transparent. "Thick blocks of wood are still transparent." Tinfoil needs many layers to hardly cast a "shadow" on the screen and it takes a very thick sheet of aluminum to reduce the fluorescence.

1. The New Transparency

Röntgen's screen showed, in the words of his first report, that "all bodies possess this same transparency, but in very varying degrees."[2] Transparency, therefore, is a property of seemingly opaque bodies, including the human body. In other words, it is not an effect. The X-ray is not something done to an object. The object is already transparent and the X-rays allow us to see it. The whole world is now understood to be transparent.

Having studied the transparency of many materials, including glass itself, which paradoxically is more opaque (because it contains lead), Röntgen looks through the human body: "If the hand be held before the fluorescent screen," he writes, "the shadow shows the bones

tour. We'll have to go up the spiral stairs, which is inside the cylindrical tower, the fifth and final one. The view up and down the tower is a dirty realist *Vertigo*. "It's always cold. It doesn't want you to be inside it for long." I'll whisper to you that "I am convinced these stairs link heaven to hell."

49. We'll climb the industrial ladder to the roof.

50. Here, you will see the plan of the building, naked. You're inside the drawing. The individual square and rectangular and cylindrical shapes connected by short bridges. Instead of carpet or linoleum, here you stand on large, smooth, grey pebbles. "It feels like a private Japanese garden." You'll nod.

51. We see the sun vanishing behind the skyline that's not Berlin or anywhere particular. An ersatz horizon.

52. I'll tell you to look down.

53. Metallic stars protrude from the walls, silently and regularly arrayed.

54. *What are they?*

55. The most convincing story I've heard is: "They're grips for angels to hold onto when they climb the sides of the tower."

56. If we were anywhere else, you'd look at me bemused. As if I was overidentifying with supernatural sap. Here, it's the only rational reason.

57. "*Wings of Desire* came out in 1987," I'll mention. "Wasn't that a film about angels in Berlin?" you ask.

58. Yes. It was. Marion as played by Solveig Dommartin, who couldn't see the ponytailed outsider angels, and Damiel played by Bruno Ganz, inhabited their own parallel dimension next to humans. Don't forget Nick Cave, one of West Berlin's star residents of the mid-1980s, who utters the words, "I'm not gonna tell you about a girl ... I'm not gonna tell you about a girl ... I wanna tell you about a girl ..."

59. You, who have been so patient with my exhaustive circuit, you will clasp my hand in flickering friendship, and, standing unusually tall, as if with wings, recite the following:

60. "The Angel dropped
and knelt
to ask a pardon
for its announcement
anticipating the coming entombment
The stone vault door
exploded into putrid passage
Italian was softly spoken
The cloth was loomed
in iris

them below and above.

28. Why two, you might ask (scanning these floating square orbs for erotic potential). "It's so she can sit there in peace and he can sit here in his own peace. They pass things to one another butter, coffee, a hardback copy of Robbe-Grillet's *Jealousy* but maintain their sovereignty."

29. You will either find this a sad model of togetherness ...

30. ... or something liberating and true.

31. At this point, will another truth bloom in your mind?

32. "Today, luxury living has come to mean expensive finishes, furnishings, bathroom taps, and 'exclusive views.' Things to display. This has come at the expense of any kind of original idea on *how* to live." For Hejduk, the antithesis is the case. All the material finishes in this building are humane but basic, suitable for social housing. Linoleum. Square white tiles. Cheap grout. "The luxury Hejduk offers is a radical rethinking of the plan of a house or an apartment. Its received principles of sense. He forces you to inhabit through invention."

33. This is a different kind of luxury. One that may have died in the handover from the twentieth to twenty-first centuries.

34. To live in an idea about living is wealth not measured in money.

35. "How *did* you get this place?" you will ask. Because everyone asks, expecting an answer rich in nepotism or savvy connections. I will honestly reply, "Providence." You will say, "What?" I clarify, "Craigslist."

36. "Let's go upstairs." This other Hejduk quote is pinned on the wall: "I don't make any separations. A poem is a poem. A building's a building. Architecture's architecture. Music is music. I mean, it's all structure. It's structure."

37. We'll be on the eleventh floor now. Another large white space, four windows, two like square eyes, and we are the brain, gazing out at the city.

38. If you haven't heard of Hejduk then you won't have heard of IBA Berlin (Internationale Bauausstellung). An initiative from 1979 led by the architects Josef Paul Kleihues and Hardt-Walt Hämer to add and renovate much-needed West Berlin housing stock mostly welfare housing and culminating in 1987 on the 750th birthday of Berlin. The date would be exactly thirty years after Interbau, a similar initiative that bequeathed Berlin the Modernist district Hansaviertel, replete with Alvar Aalto, Oscar Niemeyer, and, further away, Le Corbusier for the urban un-rich.

39. Size wasn't what made IBA Berlin so unique. It was, in particular, Kleihues's choice of architects. On the one hand, there were historical postmodernists, who, in the early to late 1980s, had usurped orthodox or late modernists as the go-to avant-garde. Aldo Rossi, Charles Moore, Stanley Tigerman. However, Kleihues also enlisted many from an outmoded neo-modern camp. OMA, Zaha Hadid, Peter Eisenman, Raimund Abraham often built their first "real" buildings confined by stringent Berlin building regulations and challenging budgets.

40. IBA Berlin also commissioned three projects from John Hejduk. This poet of the unbuilt who kept a quote by Alain Robbe-Grillet pinned above his drawing desk: "The hallucinatory effect derives from the extraordinary clarity and not from mystery or mist. Nothing is more fantastic ultimately than precision."

41. Robbe-Grillet was talking about Franz Kafka.

42. "This building would never be commissioned by anyone else," I'll explain to you, "because it's so completely irrational." A tower with just seven apartments. Two storys each. Twenty windows each. Not for affluent condo-dwellers, but originally intended for the DAAD residency program, yet ultimately never adopted for that purpose. There are also two lower blocks, with twenty apartments each, which initially housed mainly Turkish residents and families. The front facades are childlike faces, possibly crying.

43. In 1988, when the complex was finished, Checkpoint Charlie was just a few minutes away. The Wall sliced across Zimmerstrasse. This whole area between Friedrichstrasse and Charlottenstrasse, was a prominent hinterland edge of West Berlin, close to the Nazi command center. History on the sidewalks.

44. Then the Wall came down a year later.

45. The edge condition of East Berlin fused with the edge condition of West Berlin and instead of cancelling each other out as I'll argue to you they combined their alienating forces.

46. This area (what is it? Friedrichstadt? Kreuzberg? Mitte?) has the paradoxical quality of being Berlin's geometrical center while often being unmarked in Berliners' memories or minds. An ongoing no man's land, only now on the cusp of sweeping change.

47. "This is the bedroom. It can't even fit a full double bed." My artist landlady has hand-built a timber frame that acts as a 1.5 person bed. This room also can't fit anything else except a single window. "Look," and I'll point at Potsdamer Platz over there. "That's where the sun goes down." You'll lie on the bed and all you'll see is the yellowing light on the grey concrete of the cylindrical tower outside the window. You'll again feel like you're between two-dimensional and three-dimensional space. At peace.

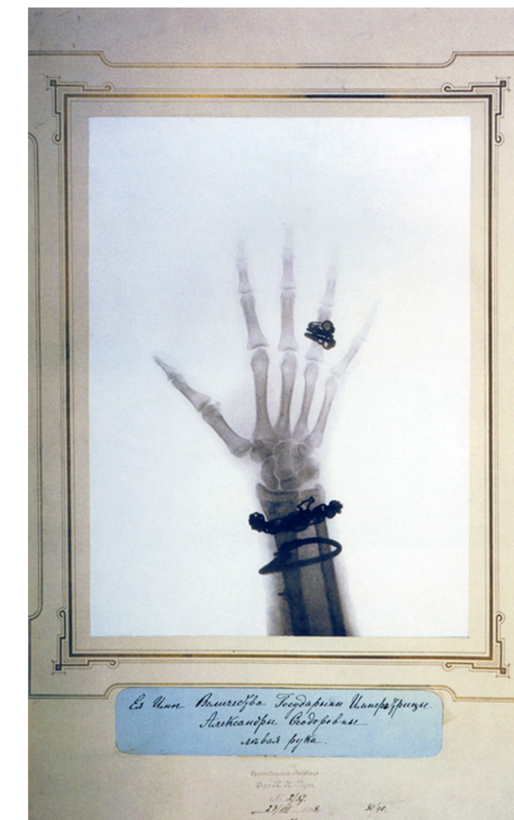
48. I'll then take you to the last part of this

darkly, with only faint outlines of the surrounding tissues."[3] The famous X-ray image of the hand of his wife Bertha Röntgen, with her wedding ring on the third finger, taken only five days before he submitted the article for publication, is used as an illustration – as proof of the astonishing revelation.[4] The image was crucial to the popular success of the invention.

Afraid of revealing his stunning discovery to his colleagues, Röntgen brought his wife to the laboratory the evening of December 22, 1895, after months of experimentation with inanimate objects, and exposed her hand to the X-rays for fifteen minutes, producing the first X-ray image of a human body. Upon seeing the image of her hand, Bertha Röntgen famously said, "I have seen my death," anticipating a common popular reaction to such images.[5]

Röntgen's article stimulated an enormous double reaction. Scientists all around the world seized on the idea and tried to replicate the experiment. The popular press ignited intense speculation about the possible uses and meaning of these images. Newspapers were galvanized by the idea of an invisible world. The image of Bertha's hand gave way to a whole genre of such images in both scientific and popular publications. Countless X-ray images of hands were made by Röntgen and others soon after the article was published. Röntgen photographed the hand of Professor Albert von Kolliker, a famous anatomist and president of the Wurzburg Physical and Medical Society, during Röntgen's first public lecture about the discovery, delivered on January 13, 1896. Summoned to Berlin by the emperor to report on the discovery, he photographed the hands of Wilhelm II and Empress Augusta Victoria. Later he also X-rayed the hands of the duke and duchess of York and the emperor and empress of Russia, among many other notables. The hand X-ray had become a new kind of intimate portrait and the icon of a new worldview, a worldview in which everything, no matter how seemingly impervious, becomes intimate.

Röntgen had named the mysterious phenomenon "X-rays" because he didn't know what they were. Kolliker had proposed, after Röntgen's Wurzburg lecture, that the new rays be called "Röntgen rays," but self-effacing Röntgen preferred to continue to call them X-rays. The justification of the term "rays," he claimed in that first article, lay in the "shadow pictures" produced by interposing a body between the source of the X-rays and a photographic plate or a screen. Röntgen wrote that in the two months



An X-ray image of a hand bearing a wedding ring was featured in the exhibition "Brought to Light: Photography and the Invisible, 1840–1900," at San Francisco's Museum of Modern Art.

before he photographed his wife's hand, he had "observed and photographed many such shadow pictures," including a set of weights inside a wooden box and a compass card and needle completely enclosed in a metal case.[6]

Röntgen considered this ability to make photographs of the "shadow pictures" on the screen of "special interest," because it made it possible to "exhibit the phenomena so as to exclude the danger of error."[7] The main advantage for him, therefore, was to provide proof, to confirm the observations already made multiple times with the fluorescent screen. Soon after its initial publication, he sent reprints of the article together with prints of the X-ray images he had taken to many scientists, including Emil Warburg in Berlin and Henri Poincare in Paris.[8] Warburg immediately added the X-ray images to an exhibition that was already mounted on the occasion of the anniversary of the Berlin Physical Society at Berlin University. This was the first public exhibition of X-ray images.

Without these images, the discovery of the X-rays would have been of less interest both in scientific and lay circles. It was front-page news in many newspapers worldwide. On January 5, 1886, *Die Presse* in Vienna was the first to report on the discovery, with an article entitled "Eine Sensationelle Entdeckung" (A Sensational Discovery).[9] In their haste, they misspelled Röntgen's name as "Routgen." The next day, the *London Standard* cabled the following news release to the world, repeating the misspelled name:

> The noise of war's alarm should not distract attention from the marvellous triumph of Science which is reported from Vienna. It is announced that Professor Routgen of Würzburg has discovered a light which, for the purpose of photography, will penetrate wood, flesh and most other organic substances. The Professor has succeeded in photographing metal weights which were in a closed wooden case, also a man's hand, which shows only the bones, the flesh being invisible.

When the *London Standard* reported on the story in the paper on January 7, 1896, they felt obliged to add: "The *Presse* assures its readers that there is no joke or humbug in the matter. It is a serious discovery by a serious German Professor." The *Frankfurter Zeitung* published the news, also on January 7, and was the first

A skeleton of a frog is revealed in an X-ray from L. Aubert, *La Photographie de l'Invisible: Les rayons X suivi d'un glossaire, les livres d'or de la science* (Paris: 1898).

new repertoire of characters, of stories, of language, and it's all parallel. It's not just building per se, it's building worlds."

16. Building worlds.

17. You may be surprised that for someone of his stature, Hejduk built relatively few buildings. (Less than a handful.) However, he was prolific in other ways.

18. I'll gesture for you to follow me. "We're in one of the walkways between the big tower and one of the smaller towers." It's just 70 cm long, and about 50 cm wide. "Notice. Windows on both sides." You will feel like you're also floating somewhere between two-dimensional and three-dimensional space. You will feel tiny and also immense because Berlin slices right through this anti-room.

19. You're part of it and apart from it.

20. This feeling was often considered to be the defining condition of life in the second half of the twentieth century. "I recommend Colin Wilson's *The Outsider*." You think I'm being quaint.

21. (Later on, you may admit the small walkway was erotic.) (I would agree.)

22. The kitchen tour will not take long because it's just 1.8 m by 1.8 m, fitted out in original grey laminate 1988 cupboards. "1988 was not a high point in kitchen design." There's another window, this one with a green metal canopy floating over it. The view turns the outside into a slowly moving still life.

23. I'll walk you to the other side to show you the mirroring room, also in its own tower (the third), separated by another walkway with its two facing windows.

24. You will ask me what Hejduk intended with such impractically small rooms. "Well," I'll pontificate, "the whole apartment oscillates between spaces that seem too big and too small." I'll say that we only become conscious of space when it is either too big (a cathedral, a palace) or it is too small (a railway cabin, a prison cell). For most of us, lived space happens in the midground and, as such, washes over us quietly. Anonymously.

25. Some trivia: *Hejduk was very tall.* Imposingly tall.

26. I'll open the two window-doors in the living room and tell you to go through the one on the left and I will go out of the one on the right.

27. Separated by about 40 cm, we now have one balcony each. A perfect cube approximately one by one by one meter, encased in gunmetal green painted steel. I think of them as two Carl Andre sculptures cantilevering above others like

John Hejduk, *Berlin Tower: Sectional Details,* 1985-1986. Felt-tip pen on wove paper. John Hejduk fonds, collection Centre Canadien d'Architecture, Canadian Center for Architecture, Montréal.

X-Ray is used to expose a woman hiding a bottle of liquor under her dress. The glass becomes visible due to its lead. This illustration is from the book Guy Pallardy, *Histoire illustrée de la radiologie*.

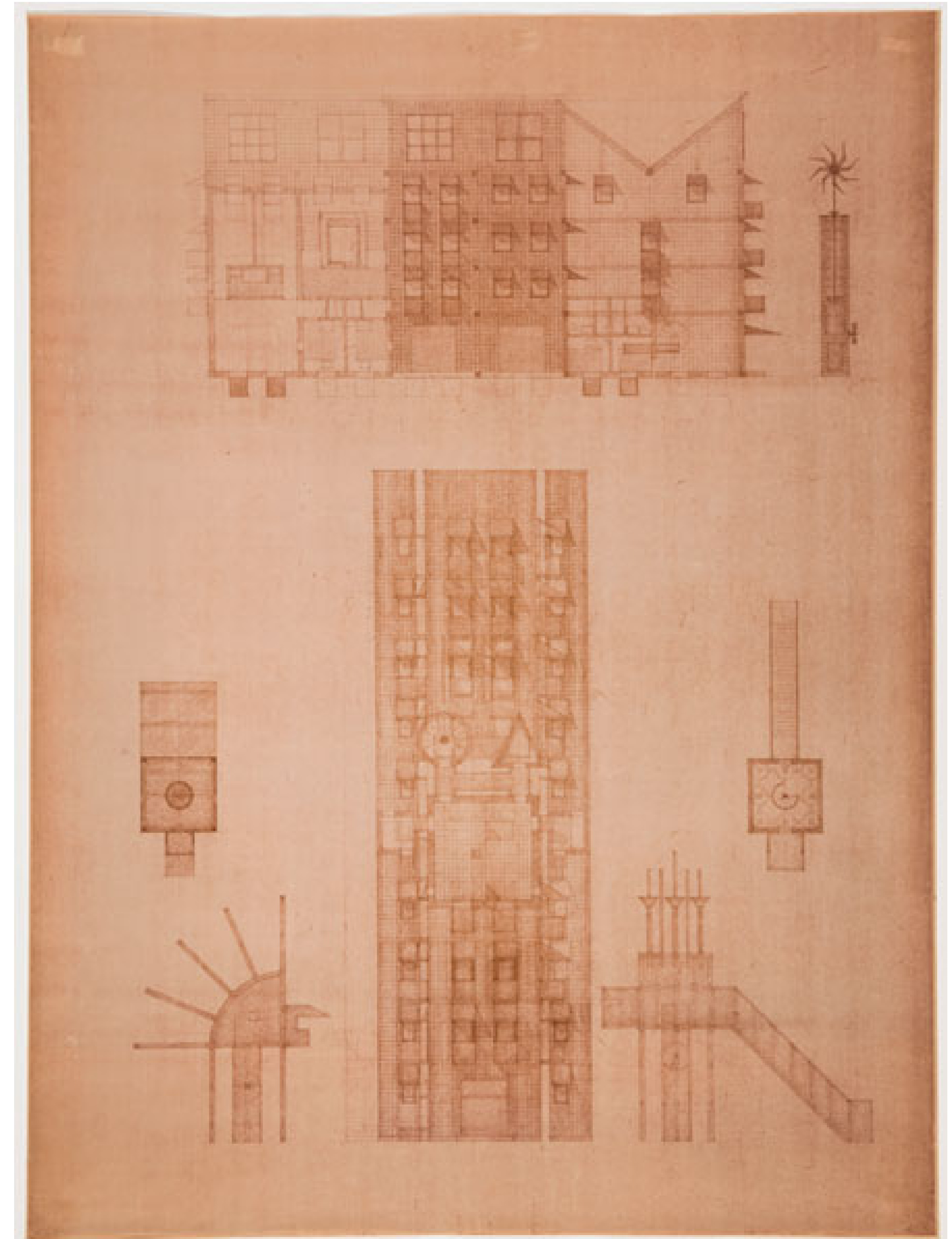
newspaper to print the images. Newspapers around the world, from *Paris Matin*, to the Krakow-based *Czas*, to the *New York Times*, *St. Louis Dispatch*, and *Sydney Telegraph*, among many others, continued to sensationalize the discovery and anticipate its medical uses, something that Röntgen was skeptical about. Since only text could be sent by cable telegraphy, most of these early overseas reports were not illustrated – prompting skepticism among readers and journalists. *Czas*, for example, wrote: “the problem, although it seems an All Fools’ Day joke, is seriously considered in serious circles.”[10]

2. The Magic Screen

Many people followed on Röntgen’s invention, developing techniques for photographing the X-ray effect. Röntgen had refused several offers to patent his discovery, declaring that it belonged to humanity. He died in near poverty. From the beginning, he provided detailed accounts of his method, allowing others to experiment. Within a month of Röntgen’s publication, Josef Maria Eder (director of an Austrian institute for graphic processes and author of an early history of photography[11]) and the photo chemist Eduard Valenta published *Versuche über Photographie mittelst der Röntgen’schen Strahlen* (Research on Photography with Röntgen Rays), an album of fifteen photogravures made from X-rays, in which they described in great detail the procedure used and the improvements they had made to Röntgen’s apparatus.[12] Human hands and feet, fish, frogs, a snake, a chameleon, a lizard, a rat, and a newborn rabbit were among the images in the album, a kind of zoo echoing the nineteenth-century naturalist albums of animals, insects, and plants, but also anticipating the new vision of photography of Moholy-Nagy and others in the 1920s. This new vision of photography would also become encyclopedic, as if the whole world had to be seen again, or more precisely, as if it were a whole new world. Moholy-Nagy would later write:

> The passion for transparencies is one of the most spectacular features of our time. In x-ray photos, structure becomes transparency and transparency manifests structure. The x-ray pictures, to which the futurist has consistently referred, are among the outstanding space-time renderings on the static plane. They give simultaneously the inside and outside, the view of an opaque solid, its outline, but also its inner structure.[13]

A male technician takes an X-ray of a female patient in 1940. This image was used to argue that radiation exposure during X-raying was negligible. Photo: Wikicommons.



John Hejduk, *Berlin Tower: Elevations and Plans,* 1985-1986. Reprographic copy on paper. John Hejduk fonds, collection Canadian Center for Architecture, Montréal

Shumon Basar

Nothing Is More Fantastic Ultimately than Precision: John Hejduk's Berlin Tower

1. Turn onto Besselstraße. You'll see the Tower, grey and green. Look for the left-hand entrance. Pass the kids' playground. Press buzzer name _______. I'll let you in. Take the elevator to the tenth floor.

2. Look out for the single piece of graffiti in the elevator (always the word "SEX," in capitals).

3. Just so you know, there is no other apartment on that floor. Just this one. The elevator doors will open and you'll see me waiting for you.

4. After I've greeted you with a Continental kiss on both cheeks (one kiss feels inadequate; three, inconvenient), I'll invite you inside my temporary home. And ask you to take your shoes off. It's an Asian tradition I take with me wherever I go.

5. Even angels have to abide.

6. "The elevator brought you up one of the five towers," I'll explain, "and now, we're standing in the central tower." You'll look around the square white room, roughly six by six meters. Plain black carpet. Mostly unadorned.

7. "Hejduk was the architect." You will look *puzzled*. It's obvious you had an expensive education. You're an avant-garde literature savant. A fan of untitled atonal dirges. You own every seminal Semiotext(e) paperback.

8. But you've never heard of John Hejduk.

9. I'll launch, quite abruptly, into a customized Wikipedia biography. He was born in 1929 and died in 2000. Between these mortal parentheses, Hejduk was one of the "New York Five," a loose band of neo-modern architects who rose to prominence in the late 1960s and early '70s, famous for reintroducing formalism to discourse and building a number of rich people's houses in rich parts of America. Soon after, Hejduk went his own inimitable way, which, it seems, was always his preferred way.

10. Hejduk the poet.

11. Hejduk the mystic.

12. Hejduk the dramaturge.

13. Hejduk the dean of the Cooper Union, New York, for decades. An influential teacher.

14. I'll point at some black-and-white printouts pinned on my white walls. Scratchy ink drawings showing menageries of objects. Part animal and part industrial factory. Little lives floating between second and third dimensions. I'll pick up a Hejduk book called *Victims,* from 1986. I'll open it to pages that describe a theatrical cast of characters, who they are, what defines their individuality, how they belong to this … community, let's call it. Or a troupe. The descriptions: quotidian and metaphysical at the same time.

15. I'll try and remember this quote by Hejduk: "I cannot do a building without building a

What interests me here is precisely how X-ray images transformed the visual field long before the so-called avant-garde. The X-ray was a new kind of realism, which was in no way in opposition to a new kind of mysticism or spiritualism. William Crookes, the scientist who developed the cathode tube used by Röntgen, was the president of the Society for Psychical Research and within a year of the discovery of X-rays announced that they produced a new sense of reality based not on outer surfaces but inner vibrations, closer to consciousness itself, as Linda Henderson has pointed out.[14] The X-ray was an optical and philosophical revolution that swept the world at astonishing speed. The first surgery with X-rays was carried out in the US within two months of the discovery, and the first fully fledged department of radiology was established at the Glasgow Royal Infirmary within a year.

It is important to note that the albums of X-rays that proliferated everywhere were still presented as images of screens. Even books aimed at popularizing science, such as the 1898 French book *La Photographie de l'Invisible*, carefully note below each image that it is a "shadow on a screen." For example, under the X-ray of a frog we read: "ombre sur l'écran fluorescent d'une grenouille fixée par des épingles sur une plaque de liège" or "ombre d'une main sur un écran au platinocyanure de barium" (shadow of a hand on a screen of platinum cyanure of barium).[15] The caption is needed because the screen itself disappears. It has the same color as the page in the publication. The caption reminds the reader that there is a screen there, a screen that was originally paper. The "shadow image" takes the place and the modality of a drawing, a ghostly trace hanging before the viewer and offering a deep gaze into the secrets of a body or even of the cosmos itself. The floating, disappearing screen becomes the most powerful of instruments.

Röntgen was fascinated that he could also produce the effect directly on a photographic plate. Within a year of the discovery of X-rays, Eastman developed a special plate for X-rays; a thin transparent surface would eventually take over the responsibility of the screen when Eastman introduced film, replacing the glass photographic plate. But the doubling, the eerie status of the shadow image, remained. The photograph of Bertha's hand was the image of an image, the proof of what Röntgen had seen countless times on the screen. It is still the image of the screen.

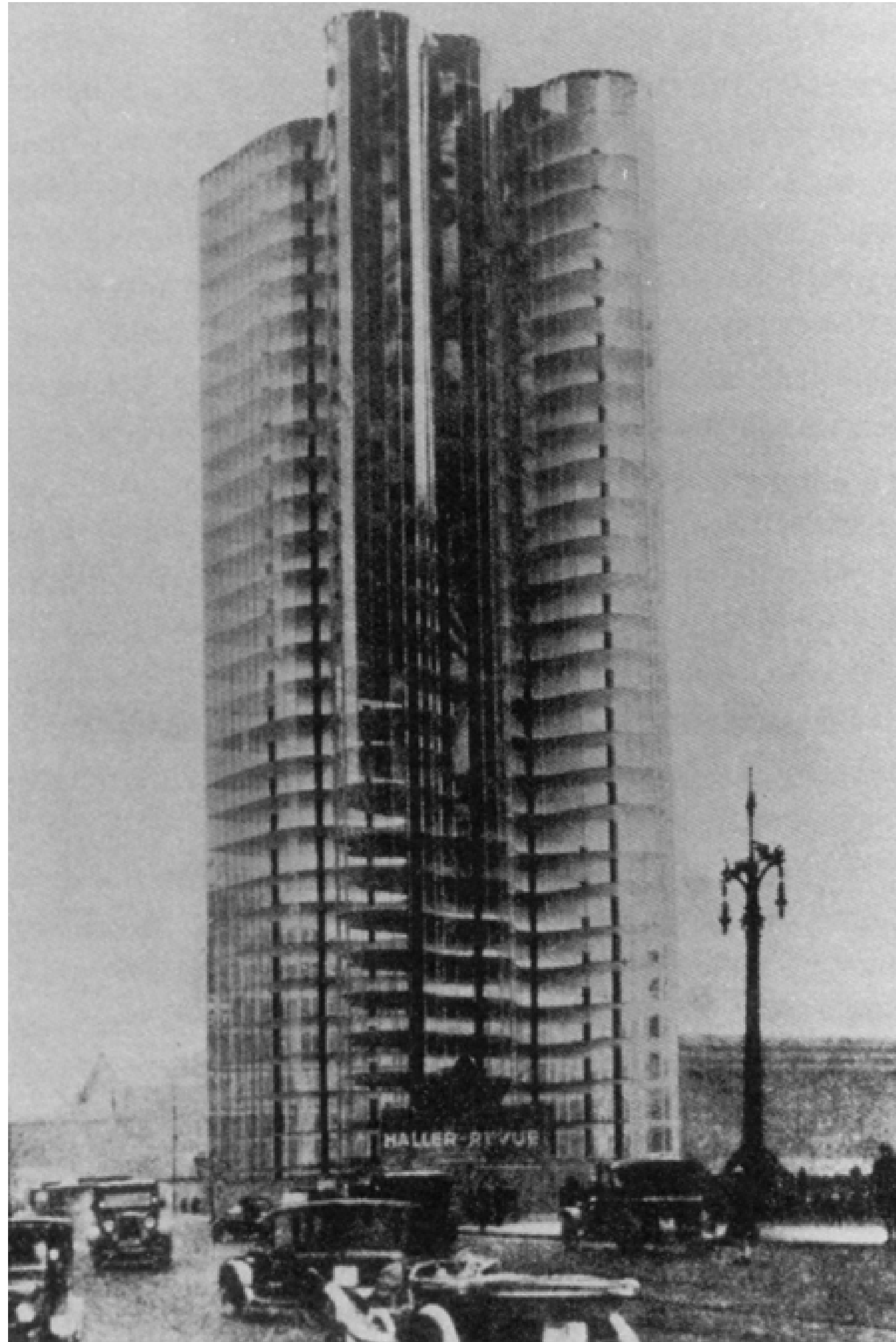
This magical and threatening screen effect rippled through society, becoming a new form of spectacle. It was as if nothing could be seen the same way. Everything needed to be rethought. Every field seemed to be affected by the magic screen – science and medicine of course, but also policing and entertainment, religion and spiritualism (where many seized upon the X-ray as proof of what they believed all along). The screen was a site of intense speculation.

From the very beginning this visual revolution was understood as an assault on privacy, and even as a form of indecency. The London newspaper *Pall Mall Gazette* wrote in 1896: "We are sick of the Röntgen rays … It is now said that you can see other people's bones with the naked eye … On the revolting indecency of this there is no need to dwell."[16] Cartoons and comical poems explored the new space of exposure. The fear that X-rays would allow people to see through clothing existed from the beginning. A poem in *Electrical Review* in 1896, for example, goes:

> The Roentgen Rays, the Roentgen Rays,
> What is this craze?
> The town's ablaze
> With the new phase
> Of X-ray's ways.
> I'm full of daze,
> Shock and amaze;
> For nowadays
> I hear they'll gaze
> Thro' cloak and gown – and even stays,
> These naughty, naughty Roentgen Rays.[17]

Shortly after the invention, merchants offered X-ray–proof underwear (as happened again in recent years when customs and security introduced full-body scanners in airports in 2007). And a New Jersey assemblyman is supposed to have introduced a bill to ban X-ray opera glasses, should they ever be invented. Thomas Edison, who exhibited X-rays to the public in the New York Electrical exhibition of 1896, even imagined that the X-ray would eventually read people's thoughts.

The X-ray was an immense form of entertainment. There were X-ray machines in every fair, scientific and popular. A leaflet distributed at an 1896 exhibition at the Crystal Palace, London reads: "Before Leaving the Exhibition, 'SEE' the Wondrous X-rays, the greatest scientific Discovery of the Age … X-ray Photographs Taken." In Paris, the *Grands Magazines Dufayel* alternated demonstrations of an X-ray machine with demonstrations of the Lumière brothers' moving pictures. Customers could have an X-ray taken of their hand or their feet as a souvenir. In fact, cinematography and X-rays were discovered within a few months of each other, in late 1895. X-ray equipment was



Mies van der Rohe, *Glass Skyscraper Project*, 1922. Photomontage.

different political systems are evolving in their own way and on their own timeline. Applying one template to all of them does not really work.

IN: My second scenario would have been to keep borders, to keep a sense of isolation so that states have the chance to evolve differently. Nowadays, differences are perceived more as something that is like a heritage, a burden that you have to deal with, but in the long run it will all come together.

RK: I think the situation is more exciting than that, because we have had that friction for the last twenty-five years. That friction is ending. I think all people with imagination have to develop a new ideal where there is connection on the one hand, and autonomy on the other.

IN: But do you have an idea of how democracy could work differently than the Western representative model?

RK: Well, there have been times when it worked, but they were times when the choices and the situation were much clearer than they are now. What makes the situation now so incredibly complex is that we have very serious differences between different political systems, but actually in terms of wealth, everyday life, connectedness, access to information, and so forth, all the systems are actually very similar. It is extremely complex now to actually know what our real differences are. It is even more difficult to imagine what the oppositions or the legitimate issues really are.

IN: Are you familiar with the Seasteading Institute? They have this idea of building new states offshore. They say: okay, we need a new frontier; if we really want to try new forms of government, we need new space, and this can only be out in the sea. So they want to build artificial islands. They imagine a situation where you don't just choose between different parties, but between different forms of governance. It up to you if you want to live in a democracy or a dictatorship, or if you want to live in a corporation. They dream of libertarian states such as Appletopia or Statebook – a state that works similarly to Facebook. It sounds like irony, like sarcasm, but they are very serious about it. I like their idea that if you guarantee people the right to move – and of course, they will also need the material means to be able to move – then you have a totally new freedom. Of course, the elite today already experience this kind of freedom. They can decide where they want to live, whether London, Moscow, or Beijing. They can even live on a yacht and just travel all of the time. So the utopia is to imagine this for everyone on Earth.

RK: I don't know. For me, this state of being on a yacht for everybody sounds a little bit *doof*. I think there is one thing that is exciting about this moment: almost all visions, all ideological descriptions, all models are exhausted at the same time. Personally, I do not think that some kind of Apple or Facebook utopia is going to help. I think that the "Facebook generation" may actually hinder the development of new narratives, simply because they are so content to live in virtual space. Again, I am not sure. But I think we're in a moment where new kinds of imagination need to be mobilized.

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we can reinvent the plausibility of some of that thinking. Not quite standardization – standardization cannot work anymore today.

IN: But you want to put some order into it.

RK: We have to develop different languages, so it's also a matter of semantics. That is what I really like, what I think has always been one of the unrecognized dimensions of our work – a genuine interest in semantics and their manipulation.

IN: What makes an icon a good icon?

RK: Icons are buildings that don't require any intelligence. They're simply based on a kind of doodle. So what we are trying to make are icons that try to find intelligent ways to state the current situation. For instance, every building on the Dubai Waterfront is based on a thirty-by-thirty-meter floor plan. So one of the icons is almost a kilometer, and then we wove it into a very complex knot where every part supports every other part. It's the most generic way you can make it an icon, by weaving it in a particular way.

IN: Today the approach is that every office building should be unique, like haute couture. You don't have any prêt-à-porter.

RK: Or uniforms. So our generics office is really trying to make that plausible again. Because if we can make it plausible again, then we can also reintroduce the contrast. Because it's horrible, this uniqueness of everything.

Gwangju, November 2013

In autumn 2010, Rem and I decided to write a book on how Western society is stuck in humanistic rhetoric. Rem proposed that we should try to interview Hu Jintao, Muammar Gaddafi, and Bashar al-Assad. OMA had recently worked on general concepts for tourism in the Libyan desert and for a museum in Damascus. A month later, the Arab Spring started, and instead of writing a book we thought about how public space in existing democracies could be relived in a persistent way. For the second Folly project at the Gwangju Biennale, curated by Nikolaus Hirsch, we ended up building an automatic ballot machine: Vote. *Since it is situated in the middle of a shopping district that is mainly populated by teenagers, we asked a local youth organization to come up with a controversial new question every other week. As part of the opening of the Folly project, we once again discuss the current state of democracy.*

IN: Is Western democracy in a general crisis?

RK: I think there is a kind of worldwide lack of performance. There is currently not a single political system that seems to be impeccably prepared. That may be partly because they are so interrelated. Therefore, all of them share a sense of crisis. This is a global moment that is so complex that basically the populations of all countries are in a state of confusion. And political leaders are not strong enough to be able to explain or interpret or guide or find ways to get out of it.

IN: Why?

RK: In 1989 and in the early Nineties there was an optimism that liberalism would be a kind of global phenomenon, and that basically the entire world was beginning to evolve in the direction of liberal democracy. We now know that this is not the case at all. Since 2008, the highly performing and successful economic system that seemed to be the guarantor of liberal democracy also doesn't seem to work. So there are two disappointments, and the interaction between those two creates a very complex situation.

IN: When the Berlin Wall came down, it was mainly due to an economic crisis in the East. This is the question no one ever raised: If you could choose between living in a rich dictatorship and living in a poor democracy, which would you choose? And now there is also the growing value of security.

RK: I don't see it as simply a decision between democracy and dictatorship, because dictatorships are adjusting themselves and democracy is also evolving. When you say "security" you probably mean the incredible collection of data that, on the one hand, promises security, but on the other hand, also seems to erode democratic rights – more than anything, the right to privacy. Since everyone is wrestling with the same issues, even though the systems are still different, structures are in many ways becoming similar.

IN: I said "dictatorship" but of course that is another challenge for Western democracy – there are much smarter ways of ruling in an authoritarian way.

RK: The West has been so incredibly dogmatic in its reading of the other side and so incredibly uncurious in terms of understanding features and probably also the qualities or the reality of the other side that for a long time they have had a false sense of security or superiority. It is maybe not so much a crisis of democracy but really the collapse of a sense of superiority for which there are many, many indicators. And that is really scary for many of us.

IN: On the one hand you could say that with the conglomeration of states and economies, the world is getting more and more integrated – leading to a world government at some point ...

RK: I do not think so. I do not think it's in anyone's interest. What is in everybody's interest is finding ways for very different entities to coexist, and building mutual respect for what the important issues are in those entities. Many

bought not just by scientist but by entrepreneurs, some of whom believed that X-rays would offer more entertainment value than cinema. Business trade journals carried ads from impresarios trying to exchange their movie projectors for X-ray equipment.[18] In 1896, Bloomingdales hired Columbia University physics senior Herbert Hawks to conduct public demonstrations of X-rays. There were X-ray studios in all major cities. X-ray slot machines were installed in Chicago; you could have an X-ray for $1.

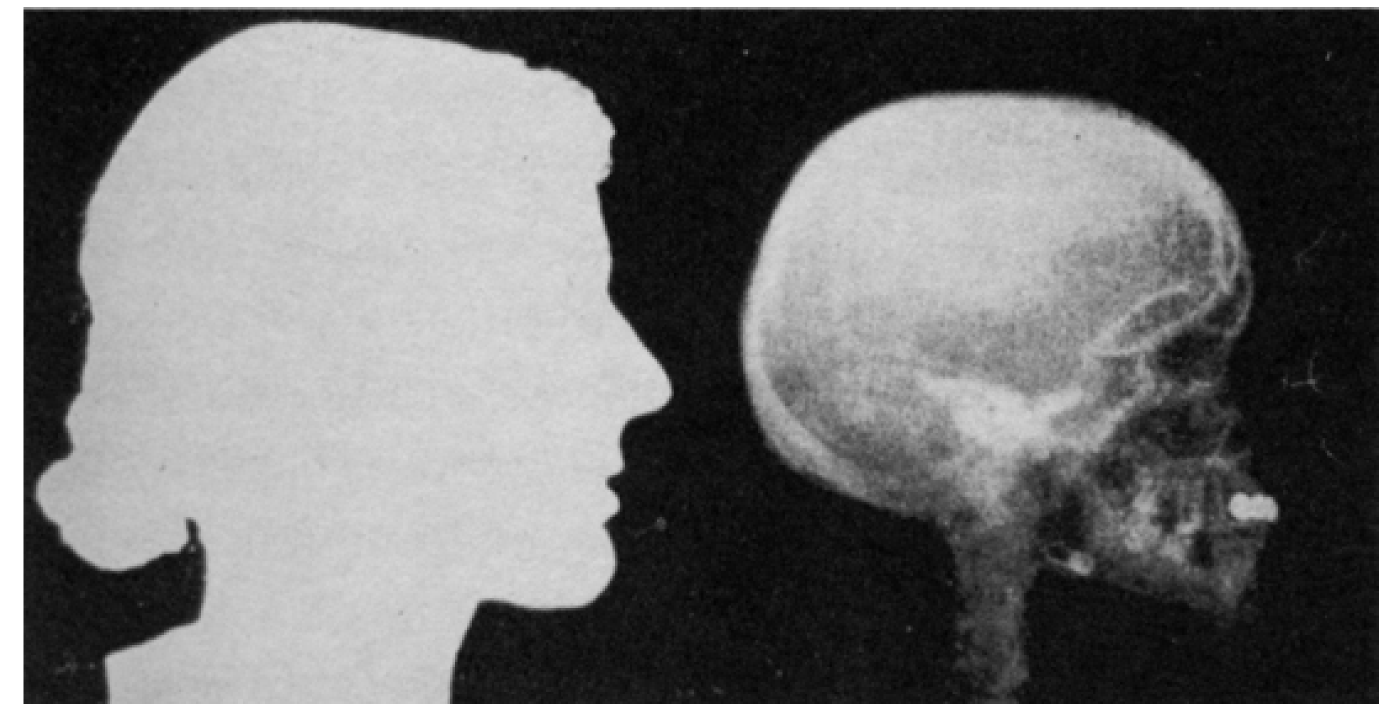
3. Building in the New Visual Field

X-rays were almost immediately used for policing in customs checkpoints, where suitcases and people were subjected to exposure. In Paris railways stations, the police subjected passengers and their luggage to X-rays as early as 1898. An illustration in a Parisian newspaper shows how a woman hiding a bottle of liquor under her dress is exposed by the machine as the glass with lead becomes visible next to her femur in the X-ray.

What is crucial here is the architecture of the scene. She is suspended behind a floating screen, held in place by an assistant. She is occupying a new space of radical exposure. The X-ray was architectural from the beginning and remains so, as can be seen in image after image, like the photograph of an attractive blond woman behind a screen made in 1940 as a publicity image to reassure the public that radiation from X-rays was negligible. She is occupying a new technological space defined by a screen rather than walls, a glowing screen with its shadow image. We are still in the territory of Bertha Röntgen and the ur-image of her hand. The mysteries of the interior are brought to the surface by a screen and the flesh becomes just a faint outline. The body is literally turned inside out.

Western architecture, at least since the Italian Renaissance, has modeled itself on the human body. With the arrival of X-rays, the body is inverted – the inside becomes the outside. Modern architecture absorbed the logic of the screen and even of the shadow image. In glass architecture the logic of the X-ray applies. There is an outer screen that disappears in order to register a ghostly image of the inside. It is X-ray architecture. As with Röntgen's transformative images, X-ray architecture becomes an image of an image – the effect of an X-ray, rather than an actual X-ray. It's not so much that the inside of the building is exposed but that the building represents exposure and this exposure occurs on a screen. Glass is called on to simulate transparency.

This X-ray effect was integral to a new discourse about transparency. Arthur Korn's remarkable 1929 book *Glas im Bau und als Gebrauchsgegenstand* (Glass in Construction and as a Commodity), for example, catalogs the new



This silhouette and X-ray of the same head was used as an illustration in Mies' article in *Gestaltung* no. 5-6, April 1926.

use of glass in architecture and remarks, as if surprised, that "the outside wall is no longer the first impression one gets of a building. It is the interior, the spaces in depth and the structural frame which delineates them, that one begins to notice through the glass wall ... Glass is noticeable yet not quite visible. It is the great membrane, full of mystery, delicate yet tough."[19] This sense of mystery, which X-rays share, infuses Korn's book, as in photographs of the Bauhaus building in Dessau where the glass wall is a kind of ripple – the volume of the building within looms without definition.

Korn's discussion of transparency is an uncanny echo of Röntgen's discussion of new forms of "transparency" in the very first publication of his discovery of the X-ray. Just as the body of the Bauhaus building appears strangely blurry through the not-quite-visible glass, Röntgen writes about the flesh becoming a kind of mysterious shadow while the bones are perfectly visible.

Modern buildings even started to look like medical images. The impact of the technology of the X-ray, the dominant diagnostic tool for lung tuberculosis, is evident in the work of many avant-garde architects of the early decades of the twentieth century. Mies van der Rohe wrote

about his work as "skin and bones" architecture, and rendered his Friedrichstrasse Skyscraper of 1919 and his Glass Skyscraper of 1922 as if seen through an X-ray machine. Mies was deeply interested in X-ray images and used them as illustrations in his articles, as in the April 1926 issue of *G.* He even put an image of a bone alongside his glass skyscraper in *Merz* to drive the point home.

Mies was not alone. Books on modern architecture are filled with images of glowing glass skins revealing inner bones and organs; they look like albums of X-rays, reminiscent of the X-ray atlases that proliferated in the early decades of the twentieth century.[20] Think, for example, about Le Corbusier's project for the Glass Skyscraper (1925), Walter Gropius's Bauhaus (1925–26), Brinkman & Van der Vlugt's Van Nelle Factory (1925–27) in Rotterdam, Mendelsohn's Schocken Department Store (1926–28) in Stuttgart, George Keck's Crystal House (1933–34) at the World's Columbian Exhibition in Chicago, Paul Nelson's Suspended House (1935), Frits Peutz's Schunck Glass Palace (1935) in Heerlen, and countless other examples. This is more than a dominant aesthetic. It is a symptom of a deep-seated philosophy of design deriving from medical discourse.

A night view of Frits Peutz Architect's building *Schunck Glass Palace* illuminates the town of Heerlen, The Netherlands, 1935. This image appears in *Frits Peutz Architect: Schunck Glass Palace* (Nuth: Rosbeek Books, 1996)

diplomatic, but it's of course also a very exciting field to provoke and torture other people. It's not a very noble thing but it's a total allergy for moralism.

IN: In *Gulf Survey* you claim that "Eventually, the Gulf will reinvent ... the coexistence of many cultures in a new authenticity rather than a Western Modernist default."

RK: What explains the ability of Dubai to live with 80 percent foreigners is that none of them intended or are even allowed to stay. That not everyone will be there forever is actually a really refreshing idea that I think could also unblock the situation in Europe in a drastic way. If you look at the countryside of Switzerland, where basically no one lives anymore – this idea of provisional inhabitation is going to be a much more practical story than multiculturalism.

IN: Germany actually had the concept of the *Gastarbeiter* [guest worker].

RK: Holland, too.

IN: But most of them just stayed.

RK: Because we could not imagine that the most happy state for anyone was not being European. I think they stayed because in the end it became the expected thing. And of course they made an incredible contribution. I'm really happy they stayed. But from now on, questioning the idea that anyone who comes stays is very liberating.

IN: In Dubai they simply leave because they don't earn enough money, and are not allowed to bring their families.

RK: It's not so much about not offering the services. It is very unlikely that the economic situation stays the same, that the advantages stay the same. And therefore it's also very unlikely that you would want to stay. Staying as a form of irresponsible and very old-fashioned loyalty.

IN: But it makes Dubai very vulnerable as well. Especially since Dubai depends highly on both foreign workers and foreign tourists.

RK: Yes, incredibly vulnerable. But I think they know that. That's why they also know that they cannot assume that what is attractive one year will still be attractive in four years. And that's what they do in China too: they use the law as a design tool.

IN: That's absolute capitalism: pay for your rights. If you want to have freedom of speech ...

RK: ... pay more.

Beijing, February 2008

Saturday afternoon in the China World Hotel. The lobby is filled with well-off Chinese families. The partners of OMA are meeting at a muggy conference room on the second floor. The shell construction of the CCTV headquarters has just been finished.

IN: What is happening with Gateway Development?

RK: We are seeing them in two weeks. They have been setting up an organization and basically defining things over the past six months. Do you know that we are working on the Dubai Waterfront? So in Dubai my mission is in a way very classical and not very polemic. My mission there is to see whether you can build serious and productive urban substance.

IN: How do you want to create it?

RK: It has all the things Dubai doesn't have: public transport, infrastructure ... So it's really more a statement about what a city can be now.

IN: Is it also based on a grid of streets?

RK: That it kind of boring but I simply don't have the imagination for anything else. We are looking at the proportion between generic buildings and iconic buildings. Rather than simply dumping them everywhere, we are looking at what the role of iconic buildings could be and whether there is such a thing as plausible icons. The Kremlin has all these towers, and basically in the Thirties and Forties the idea was to project each of these towers outward. So all these fantastic skyscrapers in Moscow are basically colossal enlargements of the Kremlin, which I think is an unbelievably beautiful idea. That is for me a plausible way of using icons: to enlarge the conceptual territory and create a relationship with history – without being light history, but really a next itineration.

IN: You are planning to put Dubai Renaissance there?

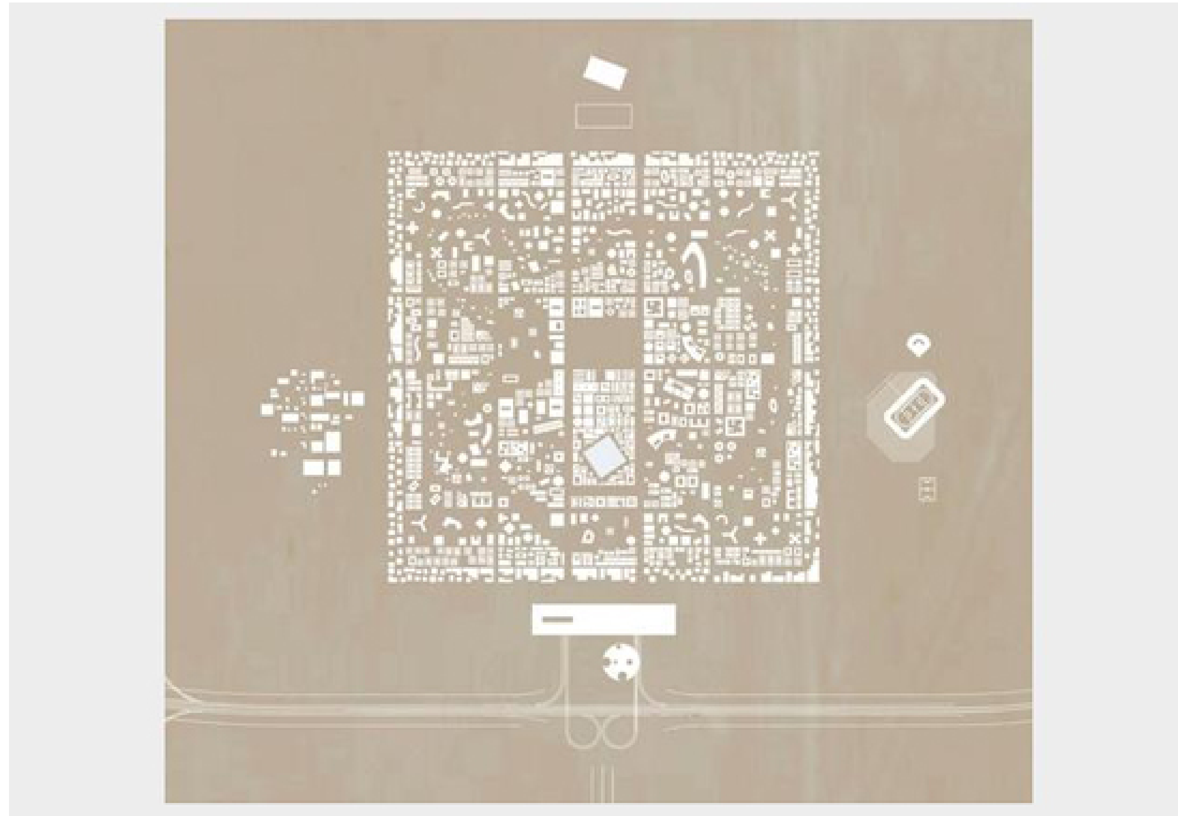
RK: Yeah, but Renaissance would be the non-icon.

IN: Then what would a *real* icon be like?

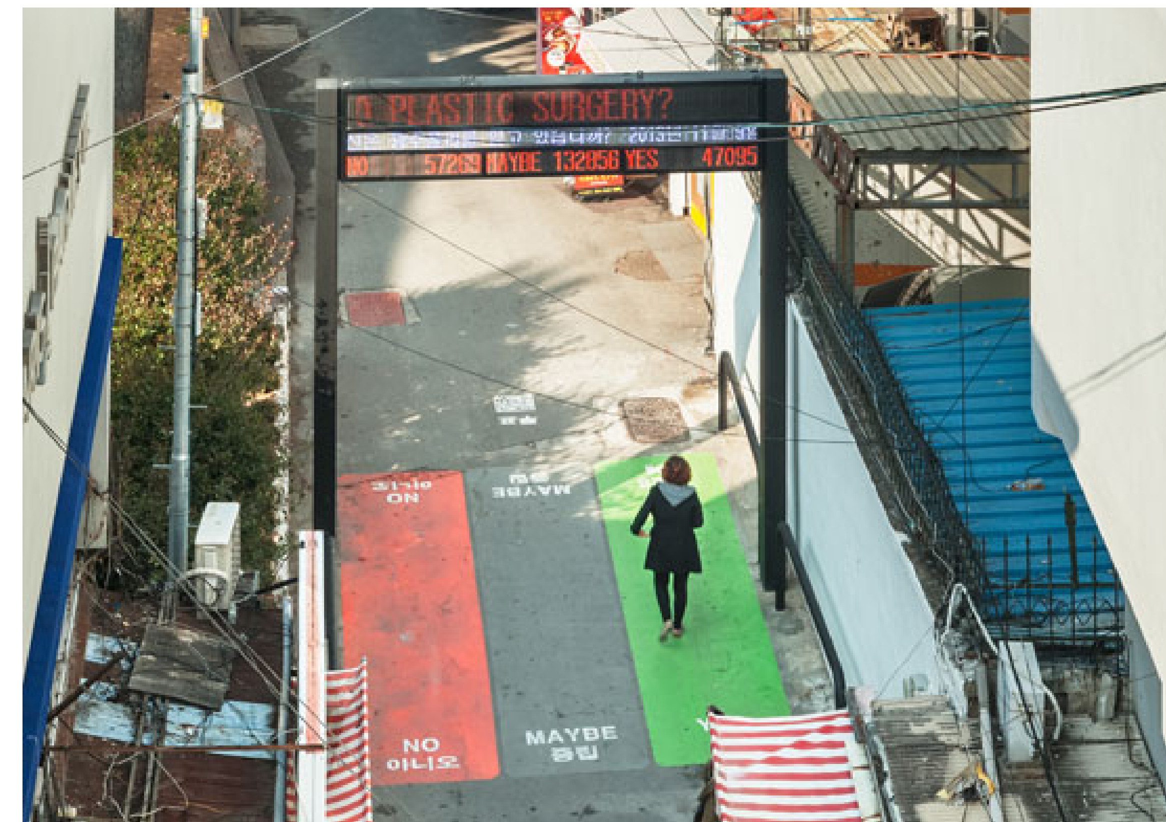
RK: There is now a special icon team in the office. One guy does it. So over the past year we produced 355 or so possible icons. The things for which you feel the greatest aversion are also potentially the things you investigate, as I've done many times. So we went from simply "being against" to trying to find plausible ways of doing. We are now producing both sides of the polarity.

IN: Last year you announced a plan to set up a "generics office."

RK: The idea in its pure form is to investigate whether an architecture with less emphasis on innovation and reinvention, and particularly less emphasis on individuality and uniqueness, is plausible again today. There is a strange phenomenon in which heritage and preservation are expanding to more and more territories now, with one big exception: all the architecture of the Sixties and Seventies and Eighties, all the architecture that is based on regular slap towers – everyone all over the world is united in wanting this architecture to disappear. And so I'm trying to find out whether



Gateway Development's plan for the city of Ras al-Khaimah is structured by a square-shaped grid.



Rem Koolhaas and Ingo Niermann, *Vote*, 2013. Photo: Bas Princen

The development of the X-ray and that of modern architecture coincide; they evolved in parallel. If experiments with glass were numerous in the early years of the twentieth century, they still tended to be isolated esoteric projects by avant-garde architects – many developed as temporary buildings for fairs. Only by the mid–twentieth century did the see-through house become realized in Mies's Farnsworth House (1945–51) in Plano, Illinois, and Philip Johnson's Glass House (1949) in New Canaan, Connecticut. Just as the X-ray exposes the inside of the body to the public eye, modern architecture exposes its interior. This exposure becomes a mass phenomenon with the picture window at mid-century at exactly the same time that the X-ray itself is becoming a mass phenomenon.

4. A Glass House Should Hold No Terrors

It was not just the house that had to be see-through. Everything from Pyrex cookware, to Saran Wrap, to windows in ovens and washing machines exposed their contents. Likewise, everything was subject to X-rays – even cars, as in a 1946 image of a Jeep featured in *Life* ("World's Biggest X-Ray") and used in the exhibition "Parallel of Life and Art" at the Institute of Contemporary Arts in London in 1953. The front cover of the catalog has a 1941 X-ray image of a man using an electric shaver, taken from László Moholy-Nagy's 1947 book *Vision in Motion*, where it is described as the work of two doctors in a New Jersey laboratory. The image had been published in *Mechanix Illustrated*, which is probably where Moholy-Nagy got it. But Moholy-Nagy also picked up images of X-rays from a 1923 issue of *Wendingen* magazine – which goes to show that architectural magazines were publishing X-ray images from early on.

But by the time of Moholy-Nagy's book, X-rays had evolved from being radical images representing the hidden truth of things to becoming almost routine elements of everyday life. Starting in the 1930s, shoe stores used X-ray machines for shoe fittings without any kind of protection from radioactivity, which wasn't banned until the 1970s. Also in the 1930s the mass X-raying of citizens on a regular basis started. With this development, the now-visible interior of the body became not just a tool for diagnosis but also the site of a new form of public surveillance. The postwar mobilization against TB included programs for the mass X-ray surveying of the entire population using mobile X-ray machines in places such as department stores, workplaces, schools, suburban streets, and public markets. Over a period of half a century, an experimental medical tool had been transformed into a mechanism of surveillance for

Philip Johnson, *Glass House*, New Canaan, Connecticut, 1949. This image appeared in John M. Jacobus, Jr., *Philip Johnson*, (NY: George Braziller, 1962.). Photo: Alexandres Georges, New City, NY.

the whole population.

The association between X-rays and glass houses became commonplace in mid-century popular culture. For example, in *Highlights and Shadows*, a 1937 Kodak Research Laboratories film on the virtues of X-rays for disease prevention by the filmmaker-radiographer James Sibley Watson, Jr., a woman wearing a swimsuit is shown strapped to a laboratory table while her body is subjected to X-rays. As her photographic image gives way to the image of her X-rayed body, the narrator declares: “This young lady, to whom henceforth a glass house should hold no terrors, will after an examination of her radiographs, be reassured that she is indeed physically fit.”[21] The glass house acted as a symbol of both the new form of surveillance and health.

A similar set of associations can be found in the discourse surrounding canonic works of modern architecture. In an interview in *House Beautiful*, Edith Farnsworth, a successful doctor in Chicago, compared her famous weekend house, designed by Mies in 1949, to an X-ray:

> I don’t keep a garbage can under my sink. Do you know why? Because you can see the whole “kitchen” from the road on the way in here and the can would spoil the appearance of the whole house. So I hide it in the closet further down from the sink. Mies talks about “free space”: but his space is very fixed. I can’t even put a clothes hanger in my house without considering how it affects everything from the outside. Any arrangement of furniture becomes a major problem, because the house is transparent, like an X-ray.[22]

The use of the metaphor of the X-ray was not accidental. It is not by chance that Farnsworth goes on to say of her house: “There is already the local rumor that it’s a tuberculosis sanatorium.”[23] Modern architecture was literally presented and understood as a piece of medical equipment.

Modern architecture cannot be understood outside tuberculosis and its dominant diagnostic tool, the X-ray. Indeed, the principles of modern architecture seem to have been taken straight out of a medical text on the disease. A year before the German microbiologist Robert Koch discovered the tubercle bacillus in 1882, a standard medical book gave as the causes of the disease “unfavorable climate, sedentary indoor life, defective ventilation and deficiency of light.”[24] It took a long time for these notions to lose credibility, as Susan Sontag writes: “The TB patient was thought to be helped, even cured, by a change in environment. There was a notion that TB was a wet disease, a disease of humid and dank cities. The inside of the body became damp (‘moisture in the lungs’ was a favored locution) and had to be dried out.”[25]

Modern architects offered health by providing exactly such a change of environment. Nineteenth-century architecture was demonized as unhealthy, and sun, light, ventilation, exercise, roof terraces, hygiene, and whiteness were offered as means to prevent, if not cure, tuberculosis. The publicity campaign of modern architecture was organized around contemporary beliefs about tuberculosis and fears of the disease – being deeply affected by the primary diagnostic tool of the chest X-ray. Modern architecture not only thinks of itself as providing sanatorium conditions for everyday life but even thinks of buildings as diagnostic instruments with the power of an X-ray. As Le Corbusier put it in *L’art decoratif d’aujourd’hui* in 1925: “If the house is all white … everything stands out from it and is recorded absolutely, black on white; it is honest and dependable … It is rather like an X-ray of beauty.”[26]

Le Corbusier’s metaphor was no accident. Diagnosis of tuberculosis continued to be difficult; physicians often confused it with other illnesses, including bronchitis, chronic indigestion, malaria, neurasthenia, and typhoid fever. To evaluate the condition, they needed to see inside the body. X-ray technology had been available in sanatoriums since the beginning of the century, and by the 1920s, the X-ray was a routine part of the examination of those with visible symptoms. Screening the body for tuberculosis meant optically penetrating areas of the body previously invisible. X-rays created a new kind of vision, a new paradigm of truth that architects could not resist. Nothing could have been more modern.

“The TB sufferer is a wanderer” wrote Susan Sontag in one her notebooks in her archives in UCLA. The patient travels to find a cure. “There is a geography of health.”[27] This nomadic figure is also the paradigmatic client of modern architecture that enters modern buildings like entering any other medical apparatus. Architecture here is less about shelter and more about a kind of exposure – X-ray exposure. There is a whole architecture of health organized around a new kind of image. The discourse about transparency in modern architecture is but an echo of the discourse about transparency that was already part of Röntgen’s first scientific paper announcing the discovery of X-rays in 1895 and immediately captivating the popular imagination: the idea that one could see through buildings and clothing challenged all assumptions and social protocols about privacy and psychological well-being.

As X-rays became indelibly associated with

are working on achieving some of the same results. There are facilities planned for wind and solar farms because in Ras al-Khaimah they don’t even have enough energy for their current inhabitants.

IN: While the West is still criticizing the Emirates for their high energy consumption …

RK: The exciting thing is that in the Emirates they are already taking the next step. So it’s like the whole history of the stupidity of the West compressed into five years.

IN: For making all this progress in such a short time, nondemocratic regimes might have an advantage. Industrialization and urbanization in Europe in the late nineteenth century wasn’t implemented by very democratic governments either.

RK: It’s an interesting idea to say that it’s basically a phase they are going through. But that’s not what I believe. On the contrary, I feel that the attitude of America and Israel is contributing to a situation where basically everyone who is not democratic no longer has to pretend that they are on their way to that ideal situation. They can point out: you abuse people and torture people, so don’t bother us. There is going to be a unified nondemocratic constellation between Russia, the Arab world, and China. That will be the new consensus.

IN: Almost all countries that are growing rapidly are nondemocratic.

RK: So they can all develop the same argument: you are unhappy about it, but you depend on us to be authoritarian to survive. It’s very sinister. If you see it happening, and if you see how we promote it and America accelerates it – it’s really a nightmare scenario because there will be very little space for anything else.

IN: Does this development weaken Western democracies as well?

RK: Completely. And I think it will happen within five years.

IN: The democracies will destroy themselves?

RK: I don’t know. I don’t want to speculate about it. I think it will be a very vulnerable situation until there is perhaps a new rhetorical energy. Of course I can always imagine that an extremely intelligent nation like Russia will have the genius at some point to reinvent itself.

IN: In *Gulf Survey* you write: “We have to negotiate what human rights means, what copyright means, and what democracy means.” Does that mean we have to downgrade them?

RK: No, but we need to look at them in a creative way. Chinese newspapers talk about the number of people who are in American jails. It’s important not to say: well, they do it too. The problem is, all these issues have been abused for political purposes. I think we have to remove the politics from them, which is of course very difficult. I remember when my mother paid five euros every month to Amnesty International – it was a totally understandable, sympathetic gesture. But now you realize that the world is not simple anymore. In the Nineties there was this incredibly stupid idea that the market economy would trigger democracy. And the only thing we have seen is the incredible unreasonable mess of the market economy. So the announced second installment never happened. Bush is just an ornamentation on that crisis. We thought the two things were inevitably connected, but they are no longer connected. The benefits of the first didn’t materialize, so the virtue of the second lost credibility.

IN: Is a populist like Berlusconi just the beginning of what could happen to Western countries?

RK: It’s certainly a very plausible story. And even Tony Blair – I think Tony Blair is very similar to Berlusconi. They were friends.

IN: And Gerhard Schröder …

RK: But Gerhard Schröder had this incredible ability to remain a *mensch* and also be probably more openly attracted to danger. That he actually started working for Gazprom is really a diabolical stroke.

IN: Last year you took part in the competition for the Gazprom headquarters.

RK: At that point I was really seduced by the idea of working on all the hardest and most questionable things. Maybe it was a self-euphoria or a narcissism to believe that in any case we would be able to come out on the good side.

IN: You could argue that in China there is a general tendency towards the better. In Russia it seems to be just the opposite. Did you hope your skyscraper as an icon would help to reverse this development?

RK: It was slightly more careful. It wasn’t a simple icon. It was actually a really working place. That of course is one way you can interpret competitions: seeing how far you can serve your values. And if they like it, it works. And if they don’t like it, you are not even in the ambiguous situation where you have to exercise somebody else’s values. But it is not necessarily something I would do again.

IN: Herzog & de Meuron, Daniel Libeskind, Jean Nouvel – they all took part in the Gazprom competition. But you are more exposed to moral criticism than any other architect.

RK: I actually sometimes think I’m the only one.

IN: It is because of your writing?

RK: Yes, I guess so. It obviously leads to additional expectations. I know I could probably be more careful or more opportunistic or more

Utterly, profoundly, completely un-visual.

IN: They don't need symbolic architecture?

RK: Or they have symbolic architecture: neutrality, without pretension.

IN: Maybe that's why the visible Western world is so rigid and boring: it's all happening on the internet.

RK: Where you can have your life? It's totally interesting to see that.

Cagliari (Sardinia), June 2007

Cagliari, the capital of Sardinia, has its first international congress on architecture. Between the harbor and a rotten satellite town famous for drug trading, Zaha Hadid is supposed to build a shiny white museum in the shape of a futuristic wing. Rem Koolhaas still prefers angular forms. As we cross the street, he stops at a bright-blue Lancia from the "folded paper era" and says: "One of the most beautiful cars ever." Thirty years after the publication of his book Delirious New York *he is about to build his own grid-based city: a two-kilometer-long square in the Arabian desert.*

IN: You are working on your biggest project so far: Gateway Development, a settlement for 150,000 to 200,000 people in the Arab emirate Ras al-Khaimah.

RK: It's been doubled actually. In the last couple of weeks they decided they want two of them. And there is a possibility that the Chinese will buy one of them, so that will become a kind of Chinatown.

IN: Who are "the Chinese"?

RK: The Chinese government is buying it as a base in the Middle East.

IN: What will all these Chinese do in this relatively poor and remote emirate with only 250,000 inhabitants?

RK: Dubai is organizing an effort where, for the first time, they want somebody to look at the whole of Dubai and create an interpretation of what is there and propose a strategy to build a kind of definitive Dubai. They realize that they are running out of space. This means that in a way the same thing is happening in the Emirates as in the Pearl River Delta – in Hong Kong, Shenzhen, Guangzhou, Zhuhai, Macau. Basically each of them is defining themselves in terms of all the others. That is also going to happen here, with the Arab Emirates. And so Ras al-Khaimah will always be slightly cheaper, slightly rougher, slightly more utilitarian, and that's why it's a proper choice for the Chinese. More and more Chinese contractors are going to work in the Emirates. It's like a Chinese camp.

IN: That would be a rather comfortable workers camp.

RK: The condition of the worker [in the Emirates] is slightly improving all the time. There is an idea that rather than define new laws, the laws for what workers need would be three-dimensional. So that instead of saying workers need beds of two meters by one meter, they create a three-dimensional *existenzminimum* that is prefabricated. So that every worker gets his own cell.

IN: What about the first of the two Gateway Developments – will the foreign workers live within the settlement or outside?

RK: There is cheap housing within it. Sixty percent will be cheap housing.

IN: Not just for the Emiratis, but also for Pakistanis and Indians?

RK: Also for Western people. For everyone who is not rich.

IN: How strictly do they have to follow your masterplan?

RK: The plots will be relatively controlled and the height of the buildings will probably be varied.

IN: Each development has a fixed rectangular shape and is supposed not to grow.

RK: That's been an idea for a long time. Philip Johnson did a city that couldn't grow. I think it's clear that it resonates much better with a general concept of what a city is.

IN: And in between these settlements will be nothing but desert?

RK: In between there will be some things that are shared. Public entities, the urban elements. A stadium. There could be a convention center, museums. We have convinced them to maintain the desert not as something that is nothing but as a feature. It doesn't have to be green.

IN: The rectangular shape of the settlements isn't fixed by walls. They are not gated.

RK: No, it's just dense.

IN: The wind will carry the sand into the streets.

RK: It will, but the density also protects against it. [*Koolhaas draws a maze-like pattern.*] So we are designing very complex textures in order to, on the one hand, maintain the sand, and on the other hand, avoid becoming the victim of it. What is also beautiful about the desert is that in certain areas there is a height difference of more than fifty meters. Those lines are going to be part of the public space.

IN: There will be little lakes as well.

RK: Not a lot. We are trying to do a miniaturization.

IN: Foster & Partners just developed a masterplan for a walled and car-free settlement in Abu Dhabi that will be surrounded by agricultural plantations, and solar and wind farms to make it self-sustaining.

RK: Rather they make it a slogan, while we

tuberculosis, the tuberculosis patient became the paradigm of this new way of thinking about bodies, objects, and psychologies. "TB makes the body transparent" writes Sontag in another note in her archives, "while to have cancer is to become more than normally opaque," perhaps because cancer turns the very structure of the body into a blur. "The X-ray permits one, often for the first time, to see one's inside, to become transparent to oneself," she writes.[28] Indeed, the tuberculosis patients in the sanatorium of Thomas Mann's *The Magic Mountain* carry their X-rays, or those of their loved ones, in their breast pockets. When Clavdia Chauchat, Hans Castor's love object, leaves the sanatorium, she gives him her X-ray as a memento:

> Then he flung himself into his chair, and drew out his keepsake, his treasure, that consisted, this time, not of a few reddish-brown shavings, but a thin glass plate, which must be held toward the light to see anything on it. It was Clavdia's x-ray portrait, showing not her face, but the delicate bony structure of the upper half of her body, and the organs of the thoracic cavity, surrounded by the pale, ghostlike envelope of flesh. How often had he looked at it, how often pressed it to his lips in the time which since then had passed and brought its changes with it – such changes as, for instance, getting used to life up here without Clavdia Chauchat, getting used, that is, to her remoteness in space![29]

The X-ray is a kind of self-exposure, a new, more intimate kind of portrait. The intrusive logic of medical and police surveillance, with the body unable to resist a newly penetrating gaze, gives way to a tender intimacy. The attempt to discipline the body – with a new regime of synchronized medical, technological, and architectural protocols – produces new psychological, social, philosophical, and emotional interactions. The seemingly fragile cloudy space of the X-ray becomes an architecture in its own right that can be inhabited, and is inhabited. All the ostensible sharpness and clarity of modern architecture gives way to soft layers of reflections and translucencies. X-ray architecture is an occupiable blur.

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The Moreeb Dune covers a road in the region of the Liwa Oasis, near Abu Dhabi, in this temporary resident’s portrait.

The Beijing Television Cultural Center fire took place on 9 February 2009, the last day of the Chinese New Year festivities. The building was designed by OMA (Rem Koolhaas) and is now being rebuilt.

issue of multiculturalism, mismanaging and actually damaging it. And seeing the same with Europe and how inept one is in terms of what Europe does, where it's important, and so on, I was provoked, along with a number of other people, to consider it. We explored whether we actually would be welcomed in certain parties. So there is the potential to do it. I'm undecided.

IN: Who's in this group of people?

RK: It's a group of friends all wrestling with the same dilemma. One is Stefano Boeri, the editor in chief of *Domus*. He is going to run for mayor of Milan. Rebecca Gomperts is a Dutch abortion activist. She organized the Women on Waves ship.

IN: What would you change?

RK: I haven't really thought about it. It's just a kind of childish emotion. It would be socialist, I think.

IN: Where does the money come from to finance socialism in a globalized world?

RK: I know all the dilemmas. There is also a vague instinct – I hesitate to call it more than that ... This is the beauty of the current situation: you as a writer, with probably very little practice in the economy, ask me the question "How do you pay for socialism?" And you have obviously been brainwashed – and that is the amazing effect of the market economy, that it really suggests to everybody that there is no alternative and that it is a definite state.

IN: I didn't say that you can't. I'm just asking how.

RK: When there was a socialist government in the Netherlands, you could get a doctor to come to your home, you could go to good schools, the universities were better, the railroads were working. During communism the Siberian tiger was protected, but after the market economy people in Vladivostok became so poor they had to eat it. So I think it's partly a very strong indoctrination that the market economy is the only system. There will probably never be a return to that kind of socialism, but the ineffectiveness and malfunctioning of the market economy in certain very important areas is so manifest that you can no longer claim that it is the final state. It's inexplicable that we are very rich now but cannot afford things that we could afford when we were poor. There must be a reason behind that paradox; one of the reasons must be that people partly get richer and partly get poorer.

IN: There is another paradox: in Singapore, Dubai, and China there is massive privatization and economical liberalization, but at the same time there is a strong, almost fascist state.

RK: That a strong state and a total liberalization are incompatible turns out not to be true. And at the same time, in the West liberty is undermined in all kinds of ways. It's in that sense a beautiful moment when there are such inconsistencies everywhere and none of them makes sense. All the formulas that were simple and simplistic have led to results that are very exotic and unpredicted.

IN: It has been a dominant idea that largely privatized cities would turn out to look like the city in the film *Blade Runner*: no functioning subway, no functioning government – all eroded. What's left is corruption and anarchy.

RK: I agree with you that the outcome is not anarchy, but rather to an amazing extent a kind of voluntary authoritarianism. By creating so much phobia about security, people have voluntarily abandoned any sense of their own privacy.

IN: Some years ago you claimed that all big cities in the world could turn into a city like Lagos – like a Moloch. But looking at Africa, for me I don't so much see the future ...

RK: ... but the past.

IN: Or something you become at least very nostalgic about.

RK: Very authentic, absolutely, and really urban. That is the switch I had to make when it came to Lagos. Because I now see Lagos as a last attempt at organizing things in a classical manner. The way I'm now working on Lagos is to describe how an entirely modernistic concept, simply through its decay and its dysfunctionality, enabled a vast amount of unpredictable and unpredicted behavior that is actually creating possibilities in the city that were never considered before, but that enable people to survive. So it's a very meticulous description of, for instance, how the simple fact that highway columns don't disappear straight into the water but have little platforms enabled thieves to work on the platforms as their mates ran cars off the road. It's looking in incredible detail at the many improvisations that infrastructures allow.

IN: I'm wondering about the inefficiency of megacities: the traffic, the pollution. A city like Beijing is the intellectual center for more than a billion people, and then there are days when the inhabitants can't think properly because of heavy smog. Can you imagine megacities coming to an end?

RK: I don't think so. In the end, thinking and power are still about bodies. Of course there is the Microsoft campus, but that is in a way almost like a concentration camp. It's barracks. So it's also a fairly rigid accumulation of people.

IN: They don't have any interest in symbolic architecture at all.

RK: They claim not to. And that might actually show a very smart awareness of global empire – any choice they make could turn against them. And they are utterly un-visual.

Andrew Herscher

Humanitarianism's Housing Question: From Slum Reform to Digital Shelter

"Digital Food," "Digital Shelter," and Voucher Humanitarianism

Some refugees from the current civil war in Syria have fled to Lebanon, Jordan, and Turkey and found themselves in novel spaces – novel not only with respect to the spaces they fled from, but also with respect to the spaces occupied by previous generations of refugees. These new spaces of refuge are structured by technologies of credit distribution in the form of automated teller machines and credit card readers: the means by which the United Nations High Commissioner for Refugees (UNHCR) and the World Food Program (WFP) have been providing assistance to Syrian refugees with which to purchase food and rent shelter.[1] This "voucher humanitarianism," undertaken in partnership with credit card companies, mobile phone companies, banks, and other businesses, has already yielded what MasterCard and the WFP call "digital food," as well as a form of housing relief that, replacing the refugee camp, will doubtlessly soon invoke the term "digital shelter."[2]

In one of the most recent innovations in voucher humanitarianism, all Syrian refugees arriving in Jordan are added to a biometric database. At Jordanian ATMs equipped with iris scanners, these refugees can be identified by iris scans rather than by ATM cards and PIN codes:

> Instead of receiving food packages, money vouchers or bank cards from the UNHCR, refugees in the iris-identification system receive a monthly text message saying money has been placed in their accounts. Then, they walk up to an ATM owned by Cairo Amman Bank, and, rather than insert a card and punch in a pass code, they look into a specially designed iris camera. Once ID'd, a refugee would be able to withdraw his or her monthly allotment of cash.[3]

Two rationales have been offered for iris scanning, each based on the increased efficiency of aid distribution that this scanning presumably permits: while refugees can "access their money in a secure way without having to keep track of a card and number," scanning will also "help thwart refugee fraud."[4] And yet, voucher humanitarianism has also brought about a new relationship between humanitarianism and the housing market. With the control of refugee bodies no longer predicated on the spatial boundaries of the refugee camp, the development of a system of housing vouchers for refugees allows the housing market to at least notionally accommodate the provision of shelter even in states of humanitarian emergency. From substandard working class housing in

“Syrian refugee Ali Ahmad Farhat holds his MasterCard/World Food Program e-card as others stand in line to receive theirs, at a basketball court in Nabatiyeh, Lebanon.” Photo: MasterCard, 2013.

Several soviet stamps portrayed a similar image of a Siberian tiger leaping forward, c. 1970.

A swimming pool designed by the advertising company Ogilvy & Mather Mumbai for the HSBC bank plays with the illusion of a submerged New York City.

beyond single buildings and to do city planning?

RK: That is one of the effects of the current situation, that since the public sector has almost disappeared there is almost no city planning. There are mostly projects that are like enclaves.

IN: If you were asked to design a city for 100,000 inhabitants, would you do it?

RK: It totally depends, but it's not one of my dreams at all. I'm inspired by things and it's not necessarily my will to create something out of nothing.

IN: The urbanity so many architects are very nostalgic about – wouldn't it be interesting to find an equivalent for it today?

RK: The work we have done recently, not as architects but as researchers, is exactly to try to define what the modern condition of the city is. To look at the effects of cities that are made at an incredible speed, with very crude assumptions and with often very brutal means. Cities in China that are built so quickly that whenever there is an obstacle, the city goes around it. So I have no problem defining it intellectually, and presumably at some point we would be able to at least work within it. But my problem with most city planning is exactly that it tries to re-create and not to really be based on those new conditions. There is a new situation emerging and it also has very strong qualities and a very strong new form of urban life. I have been able to intellectually kind of absorb it, but it's much harder to operate in it on the scale of planning.

IN: What are the qualities of the new cities?

RK: The most noticeable difference is an incredible freedom to use and abuse the city. It's much less dependent on rigid rules of behavior.

IN: But aren't there all these new means to control public life?

RK: Since architecture is so fundamentally nostalgic it has not been able to develop a discourse and an ideology that accepts the real conditions that cities offer now. The architectural profession is stuck, which forces it to almost reject anything that really happens and to design public space in a neurotic and authoritarian way. The other space that architects and thinkers about architecture neglect in terms of not reflecting on it is the political system, which enters the picture with incredible brutality. In England now there is either the neurotic re-creation of public space, or pervasive CCTV cameras and campaigns to remove dirt. The combination of the two creates a totally authoritarian condition.

IN: What should a new public space be like?

RK: There is not a singular answer. If you look at our concert hall in Porto, it's a building that stands on a completely empty plaza. There you can see that we have so much confidence in public space that we don't design it. In maintaining neutrality we have eliminated all the designer lamp posts. It is a kind of design-free area. We are also working with the government to avoid gentrifying the surrounding area. In certain conditions I really think it's at least re-ambiguating the public realm by not having all this tinkering and all this elimination of danger. It's not a strategy that works in every situation.

IN: In Beijing, city furniture really works. Tools for physical training – the government puts them somewhere in public space and people immediately use them.

RK: That's the beautiful presence of communism. That is one of the – for me – miracles to see now; whatever you think of communist regimes there is a public generosity and that is why I find Beijing so incredibly beautiful: there is a kind of softness inside all the harshness. There are these vast authoritarian spaces of communism that are actually used in a very human way and are a blatant benefit for citizens.

IN: So after all the Western discussions about wasted urban space, it also has to do with the people and whether they are willing to use the space. And of course with the pressure to use it. When you have no car ...

RK: ... you have to be in your environment.

IN: And you have a very small flat ...

RK: ... you have to be outside.

IN: But then maybe the solution is not to be found just within architecture.

RK: The solution is always to accept and to find within the new conditions the new virtues and new qualities.

IN: In contrast to Peter Eisenman and Jeff Kipnis, you have insisted on being not just an architectural but a public intellectual. What does this imply?

RK: I use it with irony, I hope you realize that.

IN: Still, I would love to take it as seriously as possible.

RK: Yes, it's not a joke.

IN: Why does it have to be ironic?

RK: There is no irony in the ambition, but the irony is knowing that the public domain is not what it used to be. The whole public world is so compromised at this point.

IN: A couple of years ago you said: "The good is not a category that interests me" (*Wired*, 2000).

RK: You know, I might still become interested in it. I am thinking of going into politics. In the past couple of years we have been governed in such a bad and damaging way. In Holland the whole thing with immigrants, it's a total nightmare where the government is ruining existing relationships and ruining the whole

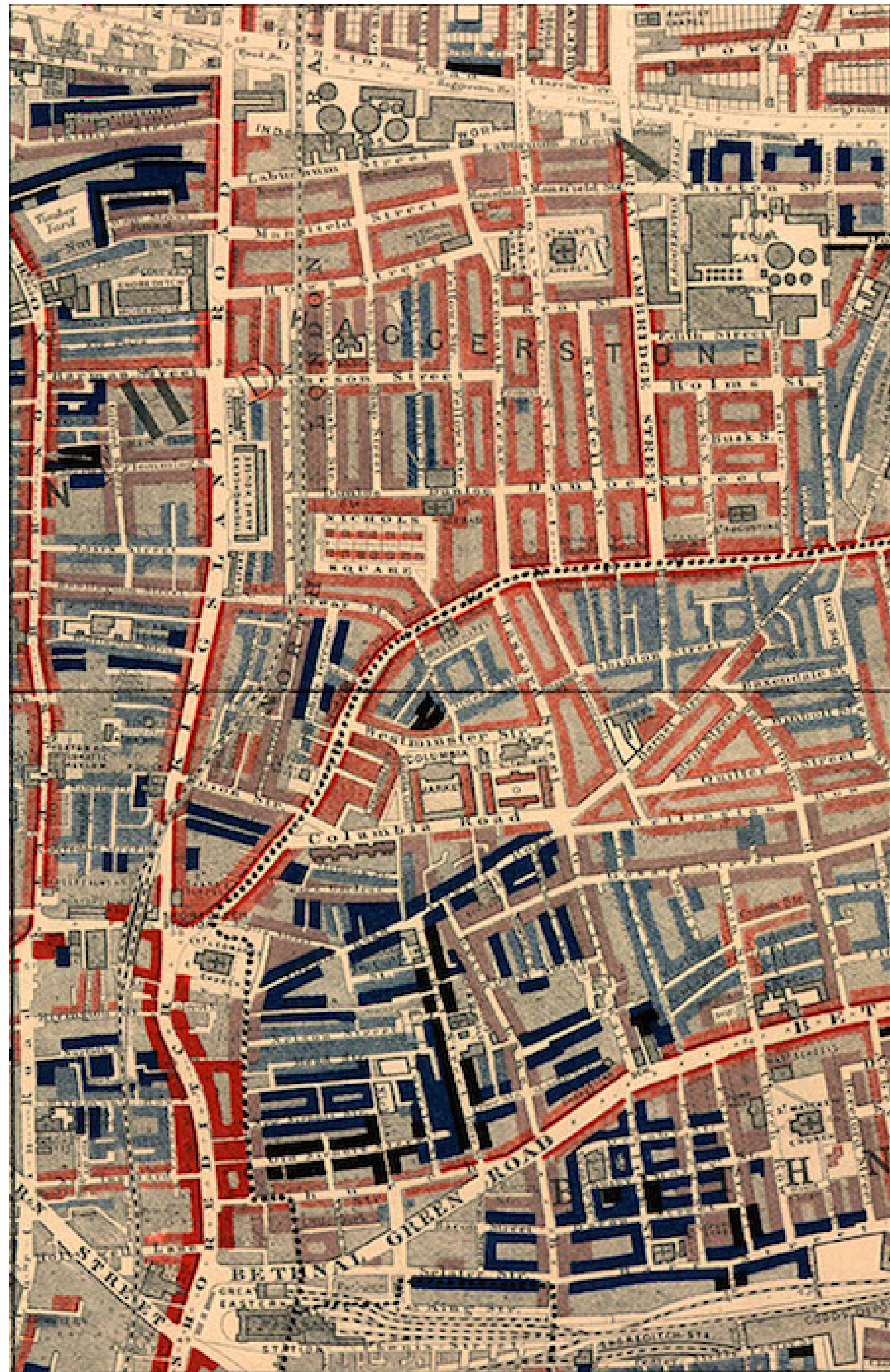
industrializing cities of nineteenth-century England to the neighborhoods of foreclosed middle class housing in post-2008 US cities, the capitalist housing market has repeatedly been posed as a crisis or emergency, structurally unable to provide adequate levels of affordable housing; now, with the advent of "digital shelter," precisely the same housing market is being posed as a *response* to housing crises and emergencies.

It is revealing, then, to examine voucher humanitarianism not only in the context of the new technologies that enable it – by far the predominant way in which it has been investigated – but also in the context of humanitarian history. In a recent essay, Daniel Bertrand Monk and I have argued that humanitarianism and architecture have shared, for much of their modern histories, a preoccupation with housing and, specifically, the question of how to house those living in particularly precarious circumstances.[5] In terms of this history, the refugee camp might represent one of the last places where the interests of humanitarianism and architecture have intersected; with the emergence of "digital shelter," the refugee camp is in effect privatized, its functions distributed across city-as-such, no matter its condition. Normalizing precarity, this rendering disposes of the housing question as a provocation to envision other forms of housing, if not other ways of living in common. When housing questions are answered by the existing housing market, in other words, the market's structural inadequacies and inequities are assumed and reproduced; to think about adequate housing for the displaced and impoverished is to problematize the conditions and situations that displace and impoverish vulnerable communities and to invite imagination of different conditions and new situations in which adequate housing is a political right rather than economic reward. *The technological novelty of "digital shelter," that is, maps precisely onto a closure of political futures.*

Humanitarianism and the Housing Question

Histories of modern humanitarianism typically locate its origin in the initiatives that emerged to ameliorate the suffering of victims of European war in the 1850s and '60s – the initiatives that lead to the founding of the International Committee of the Red Cross, the event that usually inaugurates the humanitarian project. But just as the suffering of soldiers on European

A Syrian refugee scans her iris at an ATM at a branch of Cairo Amman Bank, Amman, Jordan. Photo: UNHCR, 2015.



Detail of London Poverty Map, 1889, from Charles Booth, *Labour and Life of the People*, vol. 1 (London: Macmillan, 1889). “The streets are coloured according to the general condition of the inhabitants”; black indicates “lowest class, vicious, semi-criminal,” dark blue indicates “very poor, casual, chronic want,” and blue indicates “poor.”

OMA, *Dubai Renaissance, Dubai*, 2006. The project was initially planned for the Dubai Business Bay.

Women on Waves’s ship with abortion clinic visited Morocco for the first time in 2012.

Rem Koolhaas and Ingo Niermann

Dated Talks

Rotterdam, April 2006

I got to know Rem Koolhaas four years ago in Lagos, where we both attended a conference set up as part of Okwui Enwezor's Documenta 11. In the meantime, I have been living in Beijing for half a year, not far from the construction site of OMA's biggest building so far, the CCTV headquarters. Back in Europe, I visit Rem in Amsterdam and he shows me a brochure with the title "Dubai Renaissance." The brochure features an outline of a huge slab rotating in the middle of an artificial lake.

– Ingo Niermann

Rem Koolhaas: This is a top-secret project. It is a competition and maybe very soon it will be released. Or at least we will know whether we have won or not. It is a project for Dubai. It is one of those contemporary conditions that are considered like Singapore almost beyond seriousness. So of course I have tried to make it my mission to take those kind of places and ... our architecture is some kind of new simplicity. In Dubai it was very clear that now to do another extravagant building really is just a nightmare and makes no sense. That already defined very clearly what you can do. What we propose is a kind of totally straightforward building. It's three hundred meters tall, two hundred meters wide, but only twenty-one meters deep. And it's made entirely out of white concrete. There will be absolutely no facade.

Ingo Niermann: The engine that's needed to rotate the island ...

RK: It's actually not so big because it rotates so slowly – only once a day.

IN: Where is the sun?

RK: Always on the short side. You never have direct sunlight. Except short moments when it is deliberately out of phase. There is another island – it's an artificial rainforest and there is a treatment plant for dirty water. Another island is a water garden by Petra Blaisse.

IN: "Renaissance" sounds a bit kinky.

RK: We wanted to call it "The Slab," but that didn't seem very plausible. It's attempting to move away from the purely hysterical and iconic to find a way in which it performs that is not desperate in terms of suggesting movements but which is actually offering the real thing: an actual step in creating buildings that don't have a predictable code.

IN: The way it rotates – it's like a showcase. It's even more iconic.

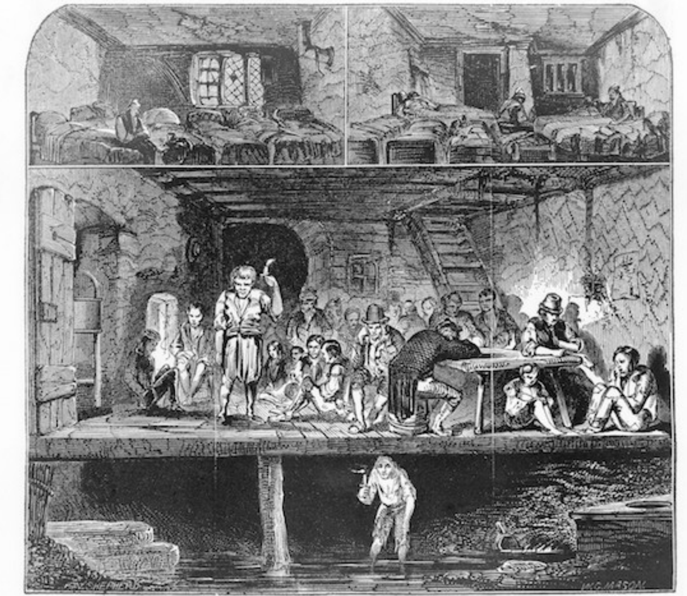
RK: Who knows. But of course it's a political building in that sense, yeah. I was in Russia this weekend. I have a friend there who immediately thought of Tatlin.

IN: As the Office for *Metropolitan* Architecture, don't you have the ambition to go

battlefields was becoming an object of the concern now called "humanitarian," so too was the suffering of the working class in England's industrializing cities becoming an object of concern to reformers, philanthropists, and revolutionaries. Some of the preceding drew an implicit relation between the violence taking place on battlefields and the violence taking place in industrializing cities, with the latter placed in the context of what Friedrich Engels called a "social war" and what others, working class and bourgeois alike, saw at various moments in early nineteenth-century England as incipient war-as-such.[6]

Working-class suffering was often analyzed, managed, and responded to through housing. In so doing, myriad concerns about poverty, morality, public health, social hygiene, labor productivity, and social stability manifested in investigations of housing conditions and calls for housing reform. Historians of Victorian-era housing reform have often used the term "humanitarian" to describe their object of study, although the term was not widely used in reform discourse itself.[7] The term "humanity-monger," however, was deployed, at times critically, against Victorian-era reformers, and at times affirmatively, by those reformers themselves. In both cases, housing reform was marked as a proto-humanitarianism and the bifurcated status of the term "humanitarian" – also used both derisively and approvingly when it emerged at the end of the nineteenth century in English – was anticipated as well.

And so, traveling through and reporting on northern England's industrializing cities in the early 1840s, William Cooke Taylor was critical of "humanity-mongers" who advocated the end of child labor without recalling that "that labor brings wages, and that wages bring bread."[8] But "we are humanity-mongers," wrote Thomas Beames a few years later, in support of an attempt to replace London's rookeries with model housing.[9] And while Marx and Engels in *The Communist Manifesto* explicitly distinguished themselves from "humanitarians" – as well as from philanthropists, utopians, organizers of charity, improvers of the conditions of the working class, members of societies for the prevention of cruelty to animals, and many other contemporary do-gooders besides – Engels addressed "the working classes of Great Britain" only a few years earlier, in the only section of *The Condition of the Working Class in England* written in English, as "members of the great and universal family of Mankind, who know their interests and that of all the human race to be the same" – a humanitarianism in form if not in name.[10]



Lodging House, Field Lane, London, from Hector Gavin, *Sanitary Ramblings* (London: J. Churchill, 1848).

The writing of Cooke Taylor, Beames, and Engels contributed to a voluminous discourse in Victorian-era England composed of magazine and newspaper articles, commission reports, pamphlets, books, and legislation on what Engels, along with many less recognized others, called "the condition of the working class." This condition was primarily addressed through housing – the inadequate and dangerous accommodations that this class was forced to occupy. In his account of English housing reform, the architectural historian Robin Evans pointed to the only image in Hector Gavin's 1848 *Sanitary Ramblings* – a section of a lodging house in London's Bethnal Green, showing disease in the basement, drunkenness on the ground floor, and sexual promiscuity in the attic – as a description of "the intimate bond between physical and moral degradation."[11] Following Gavin, who wrote that there were actually no lodging houses in Bethnal Green, Evans mentions that the image was an emblematic composite rather than a depiction of an actual building.[12] But the inclusion of the image also testifies to the importance of architecture in general, and housing in particular, as mediations of the targets of Gavin's reformist ambitions. Evans's argument that "what we now refer to as decent homes have their origin in the indecencies to be found [in the rookery den]" can be extended into the claim that housing, in the guise of rookeries and model homes alike, was the medium in which Victorian reformers represented the social problems they addressed and, in many cases, the solutions they proposed.[13]

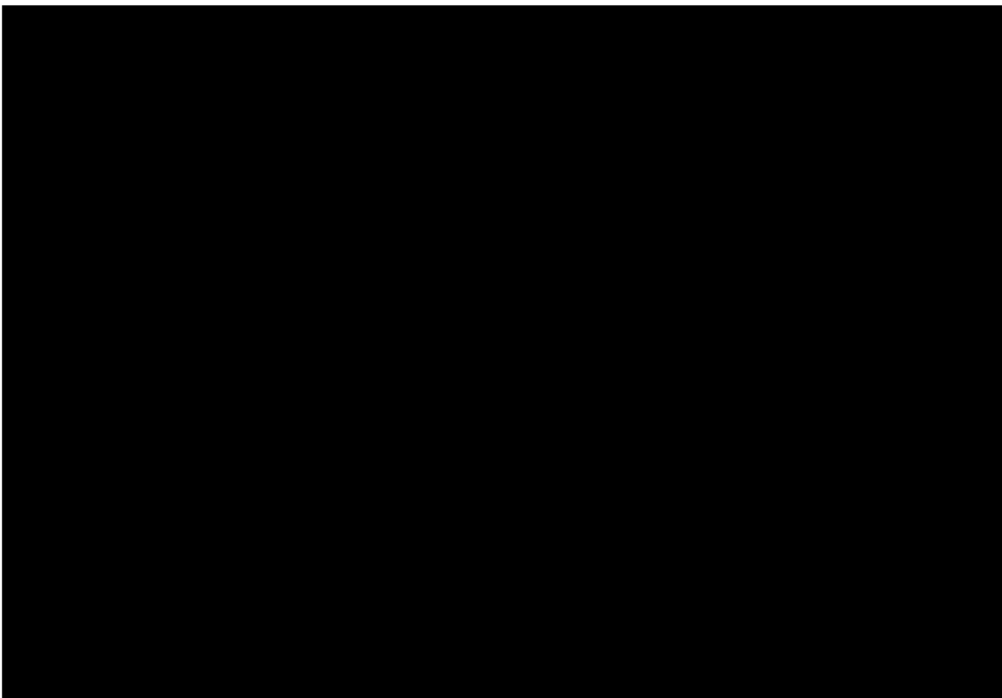
Perhaps chief among these problems was the moral failings of the working class. In James

Interior of Ikea "Better Shelter" prototype, Kawergosk Refugee Camp, Erbil, Iraq, 2015. Photo: Ikea/Better Shelter, 2015.

Taryn Simon *is a multidisciplinary artist who has worked in photography, text, sculpture and performance. Her practice involves extensive research, guided by an interest in systems of categorization and classification. Simon's works have been the subject of monographic exhibitions at Ullens Center for Contemporary Art, Beijing (2013); Museum of Modern Art, New York (2012); Tate Modern, London (2011); Neue Nationalgalerie, Berlin (2011); and Whitney Museum of American Art, New York (2007). Permanent collections include Metropolitan Museum of Art, Tate Modern, the Guggenheim Museum, Centre Georges Pompidou, and the Los Angeles County Museum of Art. Her work is included in the 56th Venice Biennale (2015). She is a graduate of Brown University and a Guggenheim Fellow. Simon lives and works in New York.*

Firewood.
took wood home from the construction site every day to use in his fireplace.

From: Antakya, Turkey
Resides: Garges-lès-Gonesse, France



7 plaster boards (1.2m x 80cm); 3 bags of plaster (25kg each); roll of oakum.
used the materials for undeclared work repairing a bathroom ceiling. He earned €500 for the job.

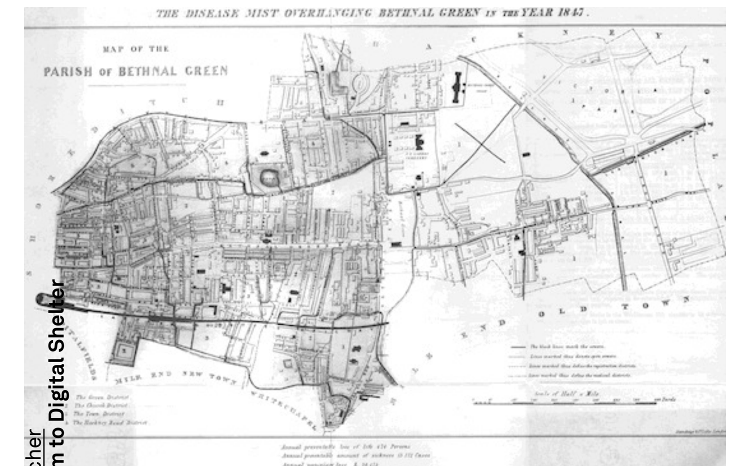
From: France
Resides: France

Grant's 1837 book *The Great Metropolis* – a self-styled examination of "the condition of the working classes of [London]" – the author urged his middle-class readers to "go to their dwellings," where they will find, "in the great majority of cases, scenes of wretchedness ... [that] are the result of intemperate and improvident habits."[14] Similarly, in the 1853 book *The Million-Peopled City*, Reverend John Garwood declared to his readers that "wherever in London ... a *Rookery* exists, we may be assured that it is inhabited by the Irish."[15] Reporting on Manchester, Cooke Taylor pointed out that "even the factory operatives are badly lodged, and the dwellings of the class below them are the most wretched that can be conceived," but he concluded that this "great destitution and delinquency ... arises from a class of immigrants and passengers."[16] Similarly, Peter Gaskell's *Artisans and Machinery,* which Engels partly relied upon in his famous examination of English working-class housing, described Manchester's poor as "debased alike by penury, want of economy, and dissolute habits."[17] And one of Engels's direct predecessors, James P. Kay-Shuttleworth, wrote in *The Moral and Physical Condition of the Working Classes Employed in the Cotton Manufacture in Manchester* that:

> We have exposed ... the condition of the lower orders connected with the manufactures of this town, because we conceive that the evils affecting them result from *foreign and accidental causes.* A system, which promotes the advance of civilization, and diffuses it all over the world – which promises to maintain the peace of nations, by establishing a permanent international law ... cannot be inconsistent with the happiness of the *great mass of people.*[18]

Here, in exactly inverted form, was the systemic analysis that Engels would soon pursue – an analysis that "might be used in the service of reform or as apologetics ... [or] as both simultaneously."[19]

In the service of reform, *architectural methodologies* to investigate the condition of the working class extended into an *architectural politics* of ameliorating the suffering and containing the threat of the working class. This politics was chiefly oriented around three ambitions: slum clearance; legislation on sanitation, ventilation, and overcrowding; and the construction of new housing. In his *Notes of a Tour,* then, Cooke Taylor reported on a meeting of the Statistical Section of the British Association in Manchester in 1841 – the year before Engels arrived in the city – where it was argued that "the high rate of mortality in Manchester was owing to the want of drainage, ventilation, etc., and *not* to the factory system."[20] A year later, England's most famous social reformer, Edwin Chadwick, wrote that "atmospheric impurity ... [is] greater or less in different places, according as there is more or less sufficient drainage of houses, streets, roads, and land, combined with more or less sufficient means of cleansing and removing solid refuse and impurities."[21] This impurity is exactly what Hector Gavin investigated – or invented – in his "sanitary ramblings" through Bethnal Green in 1848. According to the pythogenic theory of disease, epidemics derived from the noxious gases emanating from decomposing organic matter; Gavin's public health campaign thus focused on sewage networks, waste removal facilities, and the "disease mist" that they yielded.



"Disease Mist," Bethnal Green, London, 1847, from Hector Gavin, *Sanitary Ramblings* (London: J. Churchill, 1848).

Many other reformers pointed to "slums" as the problem. In his magisterial *Life and Labour of the People in London,* Charles Booth called the slum a "poverty trap" which renders its occupants "disreputable"; for Booth, these occupants would fall from poverty and chronic want into what he called viciousness and criminality.[22] For some reformers, slums were to be destroyed in conjunction with the construction of new and adequate housing for the poor: "It behooves the state both to destroy the localities which are the centres of disease and death," reformer S. C. Paul argued, "and to provide healthier accommodation for the inhabitants of them."[23] But these healthier accommodations were rarely provided, and even when they were, primarily by model dwelling associations, they selected out those most in need; "the poor," as another reformer noted, "are not always a *desirable* class of tenants."[24] Other reformers simply held that "there is little doubt that the sweeping away of the worst slums shove

people into better houses.”[25] Summarizing this trajectory of analysis in *The Housing Question,* Arthur Wesley Compton declared that “the Housing Question ... lies at the root of other great social questions.”[26]

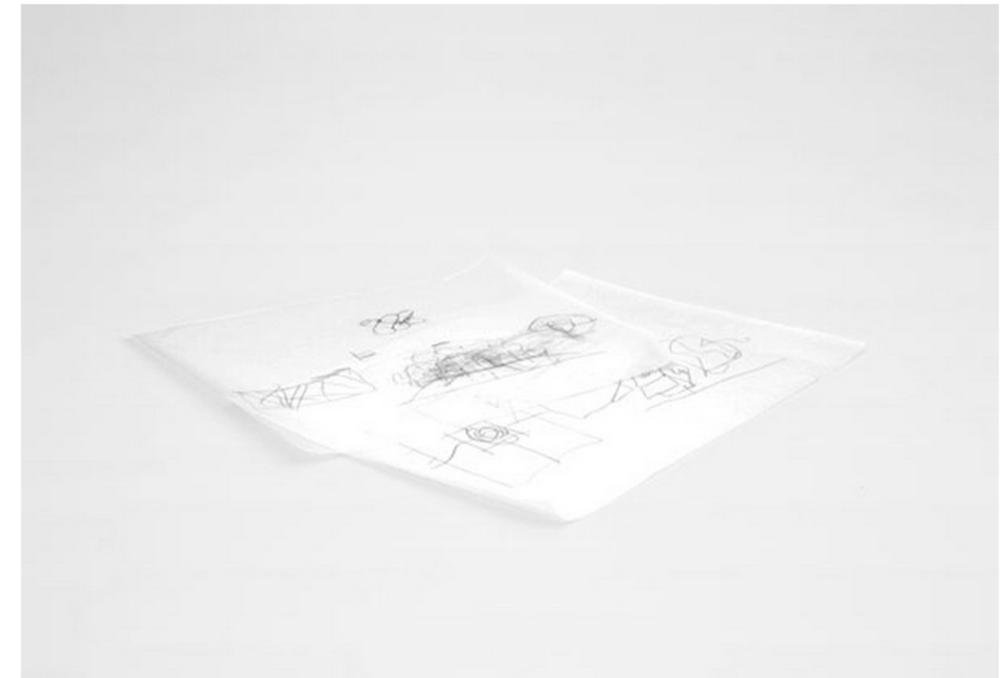
In many of the answers given to that question in Victorian England, “humanitarianism” and “architecture” became practically indistinguishable. But the reforms and proposals of humanitarian architecture displaced, deferred, or inverted the project laid out in Engels’s *The Condition of the Working Class in England.* Some four decades later, moreover, they formed the target of his examination of the housing question, where he argued that it is “only by the solution of the *social question,* that is, by the abolition of the capitalist mode of production, [that] the solution of the *housing question* is made possible.”[27]

Nevertheless, when Engels investigated the condition of the working class in England, he focused first and foremost on housing, just like his reform-minded predecessors, contemporaries, and successors. Drawing upon writers like Gaskell as well as his own investigation, Engels reported on what were already tropes of working class slums: “narrow, crooked, filthy streets” filled with garbage and

excrement, animal and human; overcrowded, dirty, and tumbledown dwellings (“if they even deserve the name!”); “defiance of all considerations of cleanliness, ventilation, and health”; and “moral ruin.” Engels also made ample use of what housing reformer Ernest Dewsnup called “a favorite method of ‘writing up’ the housing problem ... [which] is to pick out extreme cases on insanitation and overcrowding, dwelling upon the evils such conditions are capable of exerting upon the physical welfare of the community.”[28]

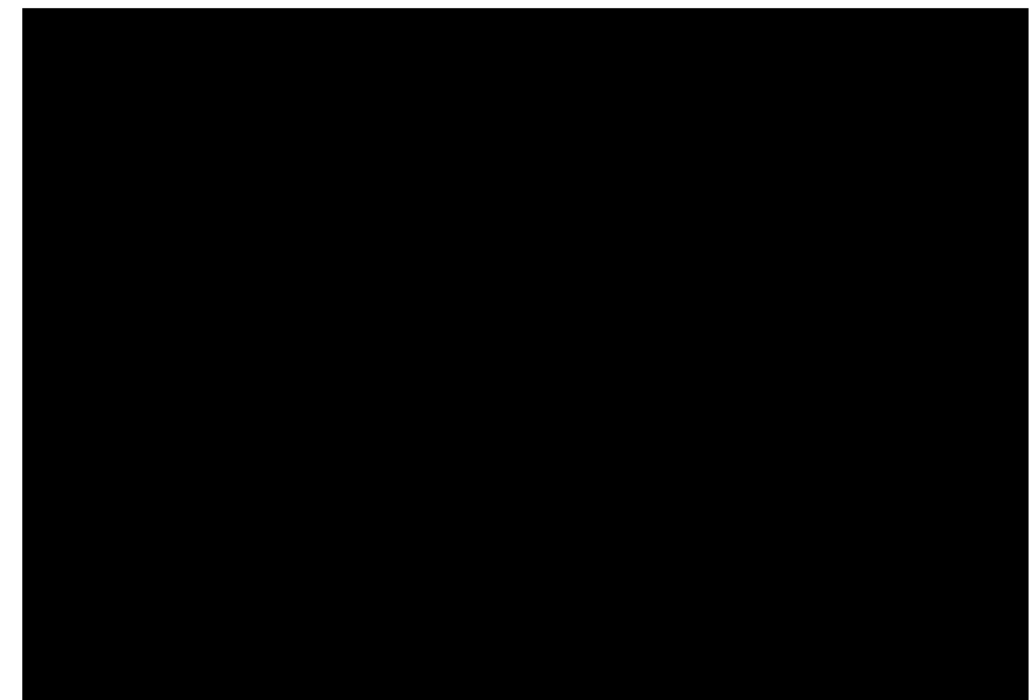
What distinguishes Engels’s account, however, is his analysis of architectural phenomena. “Everything which here [in Manchester] arouses horror and indignation,” Engels argued, “belongs to the *industrial* epoch.” Inadequate housing was thereby related to the necessarily precarious existence of reserve labor, the payment of subsistence wages by employers extracting surplus value from workers, and the profits secured by builders. Instead of appealing to the state or to elites for ameliorative intervention, Engels implicated both in the condition that needed to be ameliorated. In so doing, the home, perhaps the primary form of private property in Victorian England, was recruited to critique an inequitable distribution

Azraq Refugee Camp, Jordan, “built to try to relieve towns and cities of the burden of hosting massive numbers of Syrians who had fled to Jordan to escape the conflict.” Photo: EU/ECHO/Caroline Gluck, 2015.



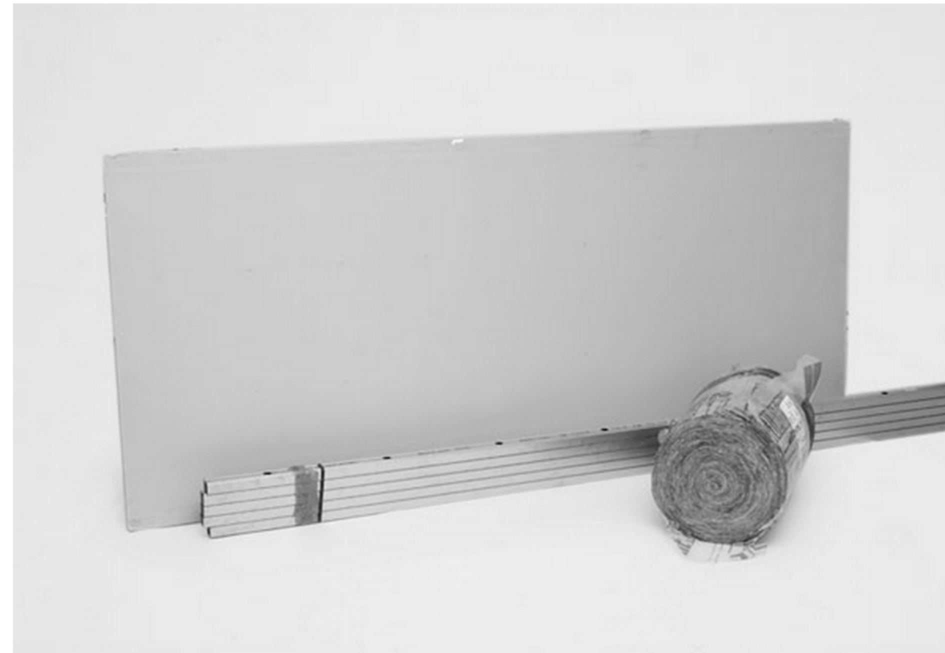
2 sketches by Frank Gehry on drafting paper—Donated.
found two unsigned sketches by Frank Gehry in a conference room following a lunch meeting between Gehry and Bernard Arnault at the construction site.

From: Nouméa, Nouvelle-Calédonie, France
Resides: Neuilly-sur-Seine, France



10 steel tubes (1.2m x 1.5cm).
used the tubes to create a tool to smash potatoes for his chickens.

From: Geel, Belgium
Resides: Meerhout, Belgium



2 drywall panels (2.5m x 1.2m); roll of mineral wool insulation (16m x 60cm); 5 aluminum rails (4m x 3.5cm)—Purchased for €50.

used 100 drywall panels, 81m of aluminum railing, and 1000 screws to build walls in his home. He also took a toilet frame and 4m of porcelain tiling for his bathroom.

From: France
Resides: France

Construction helmet—Purchased for €50.

intends to donate the €50 she received for selling the helmet to aid in the fight against the whaling industry.

From: Poissy, France
Resides: Montesson, France

of wealth and to call for "the expropriation of the expropriators."

The Privatization of Humanitarianism and the Refugee as Housing Consumer

As the systems, ideologies, and politics of humanitarianism developed, particularly after the Second World War, the question of housing increasingly began to be asked not with reference to working-class communities in industrializing cities, but communities displaced by war, disasters, and other emergencies. According to Michel Agier, the attention paid to placing displaced communities, along with other collective outcasts, at a distance from European metropoles rendered the twentieth century a "century of camps": an era in which the camp's provision of temporary shelter became well-nigh permanent.[29] A turn from "relief" to "development" in humanitarianism during the 1970s and '80s only intensified humanitarianism's investment in housing, with attention to refugee camps augmented by attention to improvements in substandard housing as preventative measures against the threats and dangers of disaster.[30]

The subsequent and still ongoing privatization of humanitarianism, however, has altered the status of the camp in humanitarian thought and practice. This privatization received its institutional mandate in 1999 when the United Nation's "Global Compact," released at the World Economic Forum in Davos, announced an intention to "harness the energy and influence of multinational corporations to act as good corporate citizens."[31] Following such partnerships as those between the Coca-Cola Company and the United Nations Development Program, the Pfizer Corporation and the United Nations Children's Fund, and the United Parcel Service and CARE International, the humanitarian housing question also became a target of corporate expertise.[32] This first played out in the context of the refugee camp, with the Ikea Foundation establishing a partnership with the UNHCR to develop a new form of temporary shelter. The resulting "Refugee Housing Unit" – ultimately rebranded as the "Better Shelter" – was designed to be shipped in flat packs, assembled without additional tools and equipment, and last for three years, two-and-a-half years longer than the tarpaulin shelters it was intended to replace.

In March 2015 the Ikea Foundation announced that the UNHCR ordered ten thousand "Better Shelters" for immediate deployment the following summer.[33] Applying techniques of consumer furniture design, construction, and delivery to refugee housing, this deployment integrates that housing to some degree into the consumer housing market. But just this integration was enormously furthered with the almost simultaneous advent of voucher humanitarianism, as the emergence of "digital shelter" allows – or compels – refugees to participate directly in the housing market as consumers in their own right.

The smoothing of distinctions between humanitarianism and capitalist consumerism is typically regarded – from the perspectives of humanitarianism and capitalism alike – as "progress." As a typical claim asserts, "with significant logistical abilities, massive resources invested in R&D and highly capable personnel, many within the aid community hope that businesses can do for humanitarian aid what Amazon did for the world of retail or what Microsoft and Apple did for personal computing."[34] But the humanitarian history of the housing question reveals that "businesses" do not only facilitate humanitarian aid, but also facilitate some of the conditions that humanitarianism responds to. It is this status of "business" – which is to say, the status of capitalism's structural violence – which is effaced in the privatization of humanitarianism. The inequalities, deprivations, and oppressions of this violence, business as usual in the frame of capitalism, thereby become business as usual in the frame of humanitarianism as well.[35]

In this sense, it is not at all accidental that the technological innovation of "digital shelter," which forces refugees to compete for substandard housing with working class renters, brings precise economic benefits to property owners in the form of increased housing demand, along with increased social suffering to communities denied affordable housing. This is already becoming apparent in Jordan, where an estimated 80 percent of registered Syrian refugees are residing outside of refugee camps, for the most part in the country's most impoverished municipalities. There, refugees are struggling with and against poor and working-class residents for affordable housing. In the summer of 2014, according to one NGO,

> The rapid influx of Syrian refugees into northern Jordan has directly impacted the housing market, driving up rental prices and exacerbating an already acute lack of housing. This challenging situation has forced many to resort to coping strategies such as sharing living quarters ... and improvising makeshift shelters with limited access to basic services.[36]

Most recently, beginning in 2015 and continuing to the present, reports have emerged of Syrian refugees moving from Jordanian cities back into

refugee camps: *these are camps that are now providing refuge not from war zones, but from cities without affordable housing.*[37] The disaggregation of humanitarianism and architecture through the advent of “digital shelter” has thereby returned to the housing question that solicited their aggregation almost one hundred years earlier. While the wars at stake in contemporary humanitarianism begin and end, the social war “of each against each” continues unabated, with the inextricable connection between these two wars becoming ever more difficult to comprehend – except, perhaps, to those who endeavor to survive them.
×

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Plaster model of a vagina (13cm x 13cm)—Donated.
■■■■■■ kept a plaster vagina that his colleague made for him.

From: Sarcelles, France
Resides: Pierrefitte-sur-Seine, France

2 nuts welded together—Donated.
Souvenir

From: Les Molières, France
Resides: Les Molières, France

Limestone tile (50cm x 45cm)—Purchased for €40.
████████ used eight limestone tiles to support an umbrella in his garden.

From: Lomme, France
Resides: Avesnes-le-Sac, France

Basalt tile (15cm x 13cm)—Donated.
████████ took 30 tiles from stock reportedly rejected by Frank Gehry. She used them to build a barbecue pit at her home.

From: Cassano d'Adda, Italy
Resides: Arcueil, France

1
On voucher humanitarianism, see Paul Harvey, *Cash and Vouchers in Emergencies* (London: Overseas Development Institute, 2005) and Gabrielle Smith et al., *New Technologies in Cash Transfer Programming and Humanitarian Assistance* (Oxford: Cash Learning Partnership, 2011). This essay draws upon and extends an analysis of voucher humanitarianism in Daniel Bertrand Monk and Andrew Herscher, "The New Universalism: Refuges and Refugees between Global History and Voucher Humanitarianism," *Grey Room* 61, forthcoming.

2
Through the "Digital Food" program, MasterCard and the WFP have partnered to develop prepaid debit cards for Syrian refugees in Turkey and Lebanon; see MasterCard, "MasterCard and the United Nations World Food Programme in Partnership to Deliver 'Digital Food'," press release, September 13, 2012 https://www.wfp.org/stories/mastercard-and-wfp-team-deliver-digital-food; and World Food Programme, "Meet our Partners" https://www.wfp.org/partners/private-sector/meet-our-partners/mastercard

3
Dina Fine Maron, "Eye-Imaging ID Unlocks Aid Dollars for Syrian Civil War Refugees," *Scientific American,* September 18, 2013; see also Gaelle Sundelin, "Iris-Scanning Technology Streamlines Refugee Registration Process – UNHCR," *Jordan Times,* July 21, 2013 http://www.growthgate.com/imagesadmin/articles_pdf/14022001551938.pdf

4
Maron, ibid.

5
Monk and Herscher, "The New Universalism."

6
"The social war, the war of each against each, is here openly declared": see Friedrich Engels, *The Condition of the Working Class in England,* trans. W. O. Henderson and W. H. Chaloner (Oxford: Blackwell, 1958 [1845]), 69.

7
See, for example, Anthony S. Wohl, *The Eternal Slum: Housing and Social Policy in Victorian London* (London: Edward Arnold, 1977), xiii; Neil Kunze, "Housing," in *Victorian Britain: An Encyclopedia,* ed. Sally Mitchell (New York: Garland, 1988), 379; Christopher Hamlin, *Public Health and Social Justice in the Age of Chadwick* (New York: Cambridge University Press, 1998), 4; and Carolyn Taylor, "Humanitarian Narrative: Bodies and Detail in Late-Victorian Social Work," *British Journal of Social Work* 38 (2008).

8
William Cooke Taylor, *Notes of a Tour in the Manufacturing Districts of Lancashire* (London: Duncan and Malcolm, 1842), 238.

9
Thomas Beames, *The Rookeries of London* (London: Frank Cass and Co., 1970 [1850]), 169.

10
Friedrich Engels, "To the Working Classes of Great Britain," in Engels, *The Condition of the Working Class in England,* 28.

11
Robin Evans, "Rookeries and Model Dwellings: English Housing Reform and the Moralities of Private Space," in *Translations from Drawing to Building* (Cambridge, MA: MIT Press, 1997), 95.

12
Hector Gavin, *Sanitary Ramblings* (London: Frank Cass and Co., 1971 [1848]), 68.

13
Evans, "Rookeries and Model Dwellings," 94.

14
James Grant, *The Great Metropolis* (New York: Saunders and Otley, 1837), 313–14; 293. Grant pluralized "working class" because he thought that "about twenty classes would comprise the leading and prominent portions of the poorer orders"; these included "the pauper," "the lodging-house class," "the foreigner," "the Jew," and "the skilled artisan," among others. See *The Great Metropolis,* iv.

15
Reverend John Garwood, *The Million-Peopled City; or One Half of the People of London Made Known to the Other Half* (London: Wertheim and Macintosh, 1853), 314.

16
Taylor, *Notes of a Tour,* 11–14.

17
Peter Gaskell, *Artisans and Machinery: The Moral and Physical Condition of the Manufacturing Population Considered with Reference to Mechanical Substitutes for Human Labour* (London: J. W. Parker, 1836), 83, 2.

18
James P. Kay-Shuttleworth, *The Moral and Physical Condition of the Working Classes Employed in the Cotton Manufacture in Manchester* (London: James Ridgway, 1832), 47.

19
Steven Marcus, *Engels, Manchester, and the Working Class* (New York: Random House, 1974), 55. Posing "bad housing" as "the result of bad living" on the part of the poor continued, of course, through the twentieth century and into the present: see, for example, Ernest Ritson Dewsnup, *The Housing Problem in England: Its Statistics, Legislation, and Policy* (Manchester: Manchester University Press, 1907), 18.

20
Taylor, *Notes of a Tour,* 262.

21
Edwin Chadwick, *Report on the Sanitary Condition of the Labouring Population of Great Britain*, ed. M. W. Flinn (Edinburgh, 1965 [1842]), 79.

22
Charles Booth, *The Life and Labour of the People in London,* vol. 3 (London: Macmillan1903), 120. "Because 19th c. improvement schemes were chiefly demolition schemes they invariably increased overcrowding": see Enid Gauldie, *Cruel Habitations: A History of Working-Class Housing, 1780–1918* (London: George Allen and Unwin, 1974), 85.

23
S. C. Paul, "Evictions in London," *MacMillan's Magazine*,October 1882, 498. See also William Torrens, "What is to be Done with the Slums?" *MacMillan's Magazine*, April 1879. On housing demolition and construction in Victorian England, see Robert F. Haggard, *The Persistence of Victorian Liberalism: The Politics of Social Reform in Britain, 1870–1900* (Westport, CT: Greenwood, 2001), 156.

24
James Hole, *The Homes of the Working Classes, with Suggestions for their Improvement* (London: Longmans and Green, 1866), 42.

25
Charles M. Allen, "The Genesis of British Urban Redevelopment," *Economic History Review* 18:3 (1965): 612.

26
Arthur Wesley Compton, *The Housing Question* (London: Land Agents Record, 1901), 3.

27
Frederick Engels, *The Housing Question* (London: Lawrence and Wishart, 1942 [1872]), 18.

28
Dewsnup, *The Housing Problem in England*, i–ii.

29
As described by Agier, "If the 20th century in Europe was the 'century of camps,' what is happening on the world scale today is the extension and greater sophistication of various forms of camps that make up a mechanism for keeping away undesirables and foreigners of all kinds – refugees, displaced, 'rejected'": see Michel Agier, *Managing the Undesirables: Refugee Camps and Humanitarian Government,* trans. David Fernbach (Cambridge, UK: Polity, 2011), 3–4.

30
See, for example, Fred Cuny, *Disasters and Development* (New York: Oxford University Press, 1983).

31
United Nations, "Secretary-General Proposes Global Compact on Human Rights, Labour, Environment, Address to World Economic Forum in Davos," press release SG/SM/688, 1999 http://www.un.org/press/en/1999/19990201.sgsm6881.html

32
See Stacey White, *Corporate Engagement in Natural Disaster Response: Piecing Together the Value Chain* (Washington, DC: Center for Strategic and International Studies, 2012).

33
United Nations High Commissioner for Refugees, "A Safe Place to Call Home," 2012 http://www.unhcr.org/pages/52a5c44f6.html; Ikea Foundation, "A Home Away From Home," March 24, 2015 http://www.ikeafoundation.org/better-shelter/

34
Steven A. Zyck and Justin Armstrong, *Humanitarian Crises, Emergency Preparedness and Response: The Role of Business and the Private Sector* (London: Overseas Development Institute, 2014), 5.

35
See Slavoj Žižek, *Violence: Six Sideways Reflections* (New York: Picador, 2008).

36
REACH, *Housing and Tensions in Jordanian Communities Hosting Syrian Refugees,* June 2014 http://www.reach-initiative.org/?s=housing+and+tensions+in+jordanian+communities

37
Teresa Walsh, "Syrian Refugees Move Back to Camps in Jordan," *US News and World Report,* January 28, 2015 http://www.usnews.com/news/articles/2015/01/28/syrian-refugees-move-back-to-camps-in-jordan; "Over 3,000 Syrian Refugees Return to Azraq Camp From Urban Areas – UNHCR," *Jordan Times*, August 3, 2015 http://www.jordantimes.com/news/local/over-3000-syrian-refugees-return-azraq-camp-urban-areas-%E2%80%94-unhcr

Kadambari Baxi, Jordan Carver, Mabel Wilson

Who Builds Your Architecture?: An Advocacy Report

e-flux journal #66 — #66—october 2015 Kadambari Baxi, Jordan Carver, Mabel Wilson
Who Builds Your Architecture?: An Advocacy Report

In our recent exhibition at the Istanbul Design Biennale, WBYA? (Who Builds Your Architecture?) installed a "workroom" that allowed visitors to reflect upon the context of transnational building projects and to consider where human rights issues overlap with processes of architectural design and construction. On a large table built for holding discussions and for reading reports on various issues, we displayed a long drawing that mapped the network of a fictional building project. A stadium construction site sat in the center of the drawing, and both sides charted the paths of migrant construction workers as they travel from their villages to job sites as well the movement of a steel truss from design to fabrication to a building site.

In the drawing, a steel truss is designed by architects based on the overall stadium design, aesthetics, and functional criteria. Most likely, aspects of labor required for the truss to be fabricated or installed on site are not considered for its design. Architects use BIM (Building Information Modeling) and other software to design and coordinate construction details with engineers and manufacturers. For large international building projects, architects often collaborate with specialized consultants such as structural and mechanical engineers, fabricators, and sustainability consultants who are often from different countries, atomizing knowledge of the building construction across a wide spectrum of experts. Factories may not be located in the same countries as architects and engineers, clients or the site of the building project. Architects and consultants may visit the factory to review a prototype or mockup of the truss. Production line workers at the factory may or may not be unionized, or work with fair labor practices. A crew of port workers including handlers, train operators, drivers load and unload the containers in different countries, and those containers must clear custom review and pay requisite national tariffs. Finally, the steel truss arrives at the staging area of the construction site, where the site foreman, subcontractors, and construction managers oversee the installation of the truss in the building by migrant construction workers, possibly referring back to architects' construction drawings.

We interspersed this mapping of the convergence of global workforces on a building site with reports from sources such as Human Rights Watch and Amnesty International that document the issues facing migrant construction workers. Descriptions of steps in the migratory paths of workers as well as working processes in design and construction processes ended with questions speculating where solutions might intervene. How can architects ensure human rights protections extend to those who build

Universal key—Donated.
■■■■■■■■ took a universal key for the trapdoors on the construction site.

From: France
Resides: Paris, France

Limestone letter U – Donated. ■■■■■■■■ took the letter from the word "Vuitton" in a limestone prototype of the museum's signage.

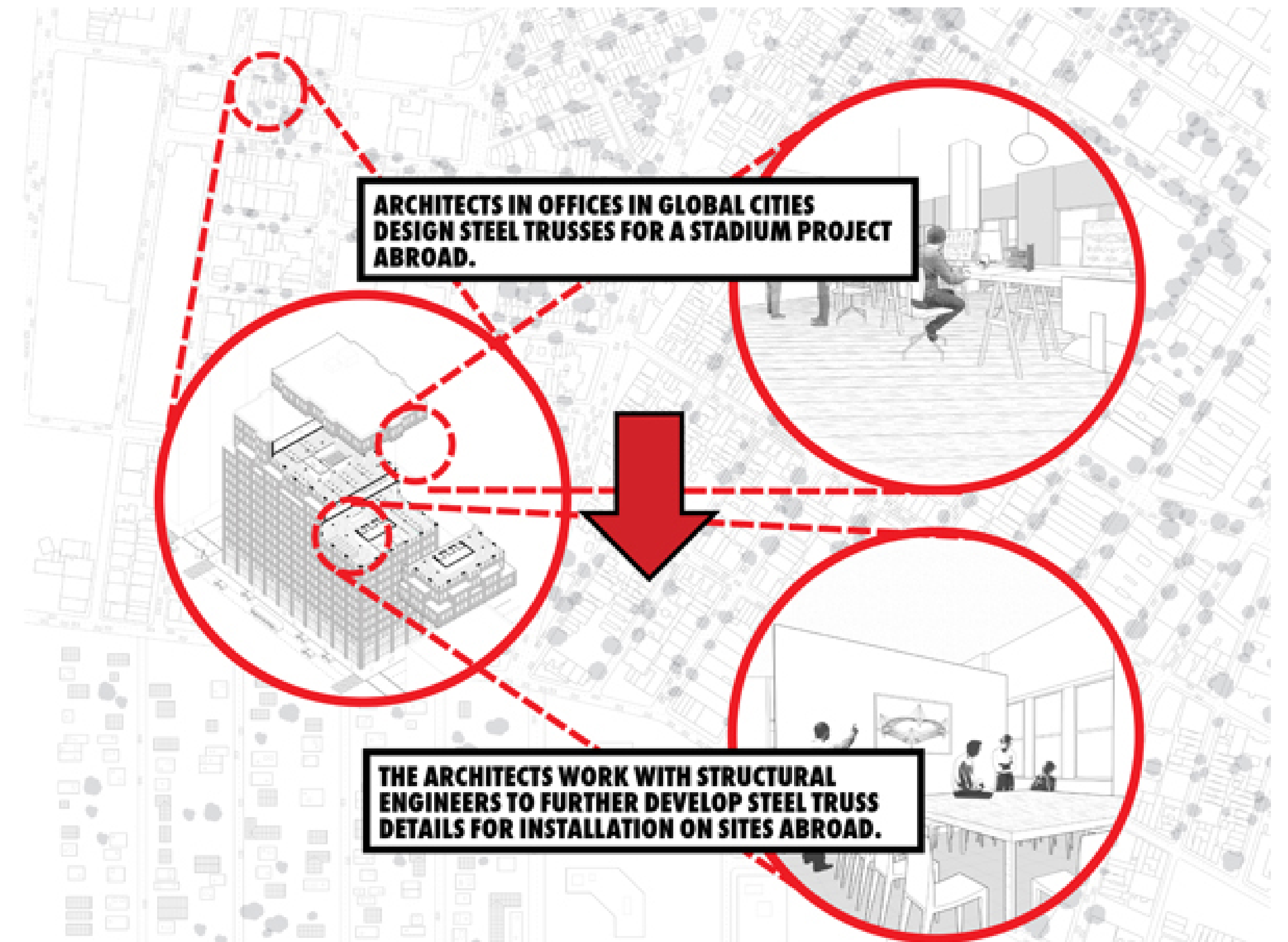
From: Nouméa, Nouvelle-Calédonie, France
Resides: Neuilly-sur-Seine, France

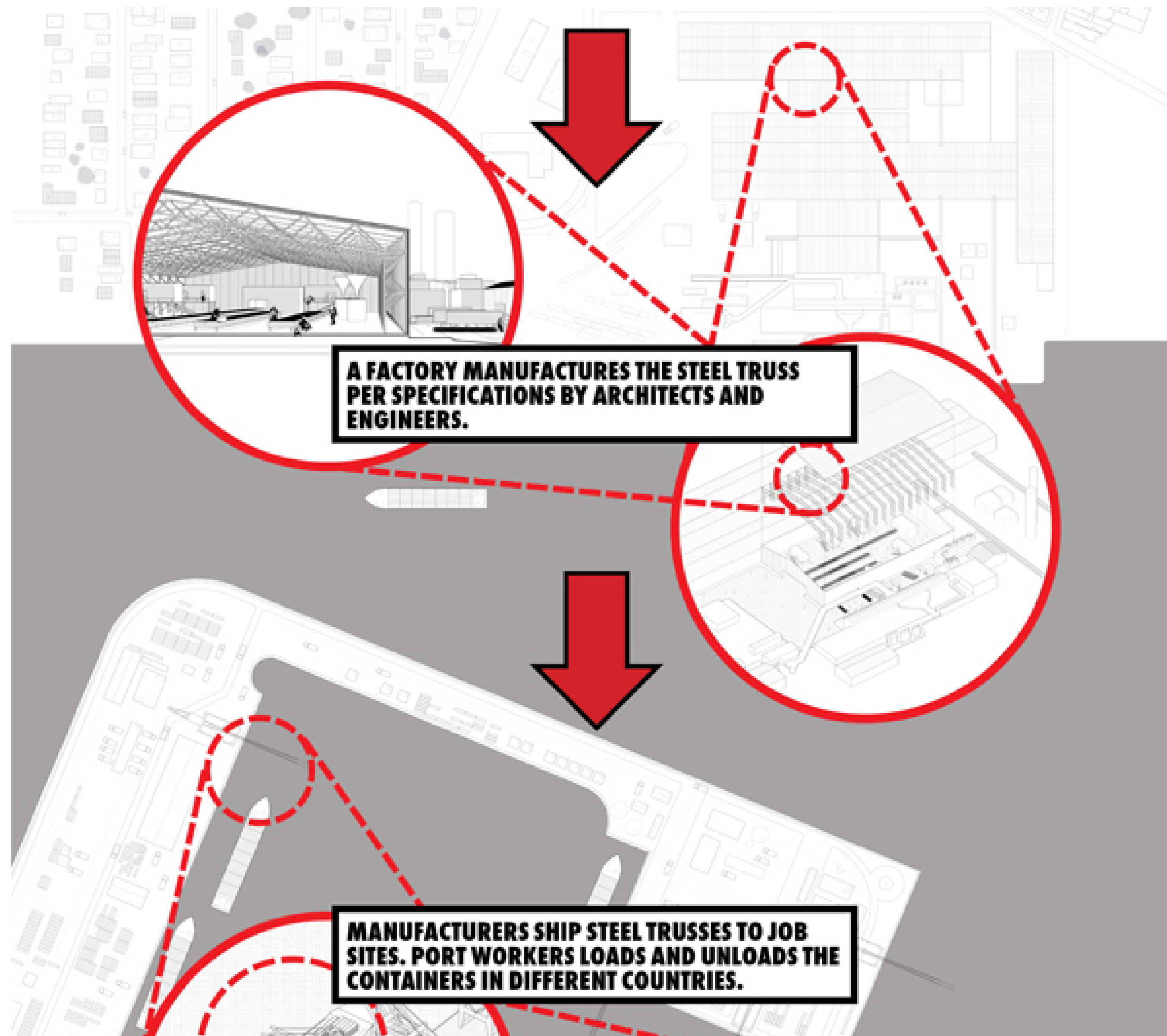
Plaster model of penis (30cm x 7cm)—Purchased for €50.
▬▬▬▬ found the penis on his office chair. He put it on his desk, but it made people uncomfortable so he moved it into the closet.

From: Paris, France
Resides: Levallois-Perret, France

Aluminum attachment bracket (30cm x 2.5cm)—Donated.
▬▬▬▬ used the bracket as a stress-relief object. He explained that this is why it is so crooked.

From: Paris, France
Resides: Boulogne-Billancourt, France





2 smoke detector cables; 9 spotlight cables; 5 power supply cables; LED lighting cable; RJ45 network cable—Donated.
████████ and two of his colleagues claimed they sold approximately €15,000 worth of copper and aluminum cables to a scrap dealer. ████████ called it a "petit bonus" (small bonus).

From: France
Resides: France

22 9mm casings—Donated. ████████ kept the casings from an acoustical test in the auditorium during which guns were fired.

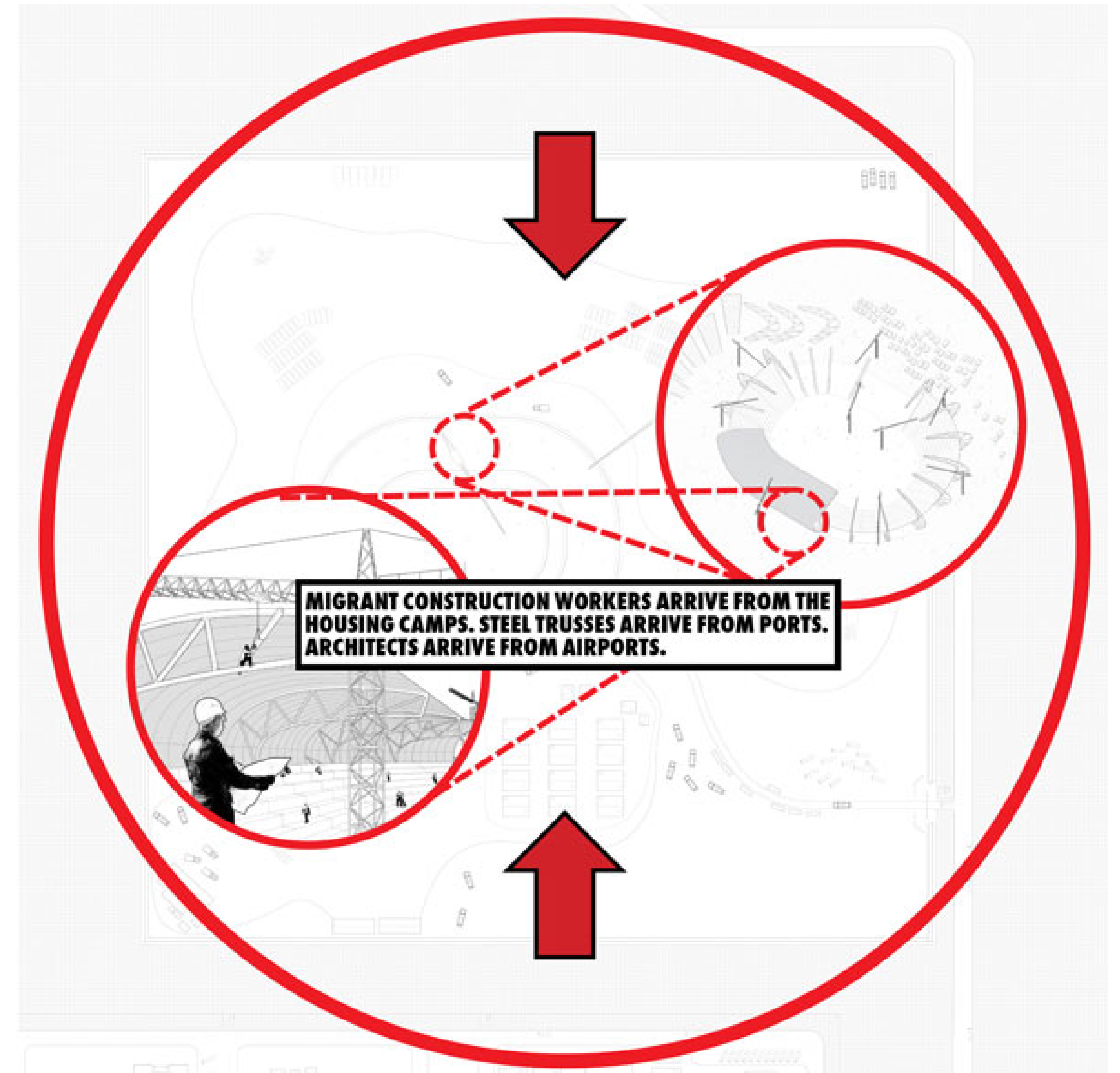
From: Niamey, Niger
Resides: Brou-sur-Chantereine, France

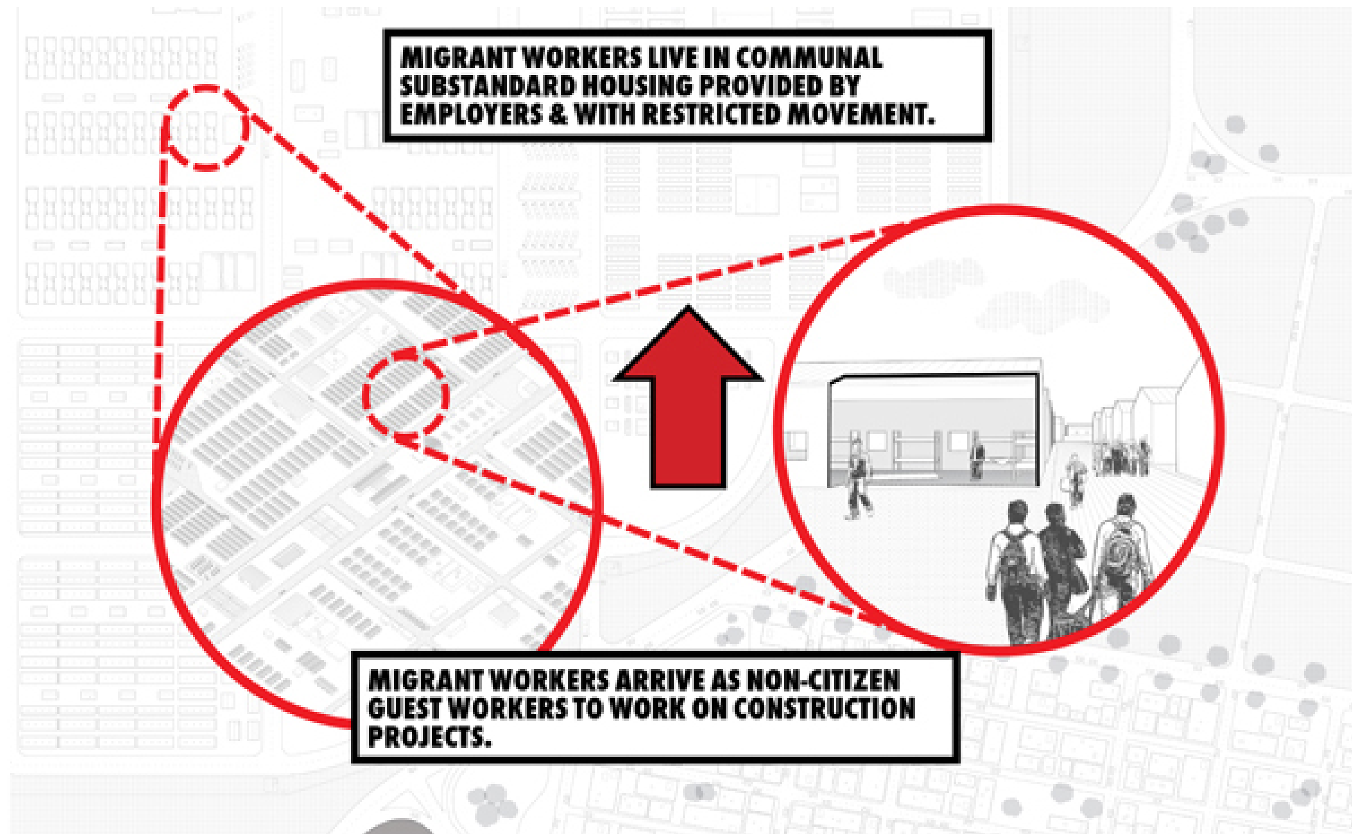
Heart cut from concrete panel (30cm x 30cm)—Donated.
▬▬▬▬▬ made the heart for his wife, Jenny, who was battling ovarian cancer. She kept it on top of their television at home in Germany.

From: Magdeburg, Germany
Resides: Kleinleitzkau, Germany

Eye bolt (34cm) – Donated. ▬▬▬▬ kept the eye bolt in his car to use as a weapon for self-defense.

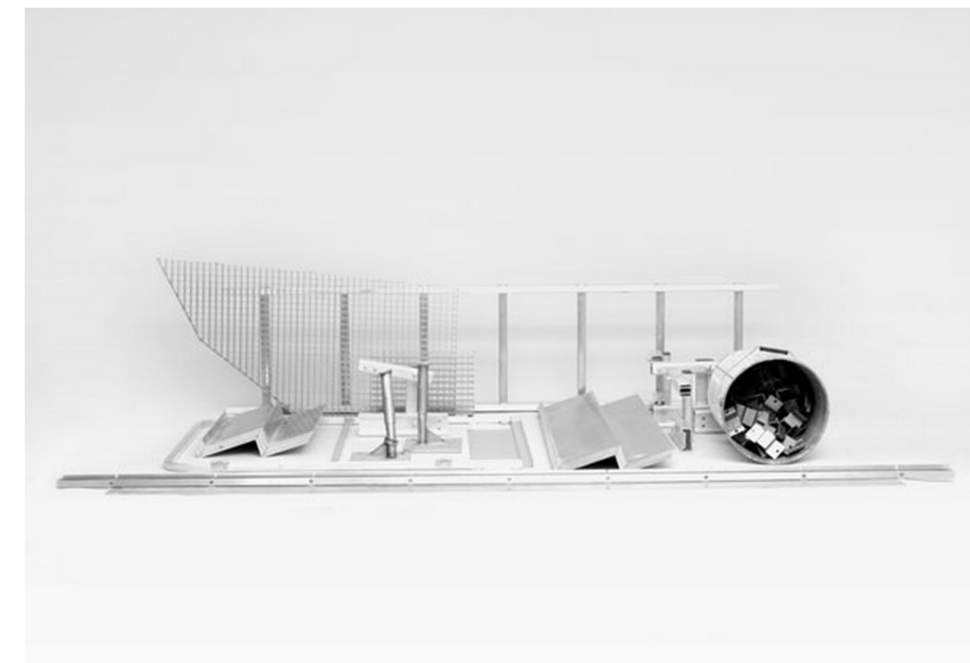
From: Assomada, Cape Verde
Resides: Gournay-sur-Marne, France





Eye bolt (19cm)—Donated. *Souvenir*

From: Poissy, France
Resides: Achères, France



Aluminum (62kg) and steel (60kg)—Purchased for €182 (aluminum: 1€/kg; steel: 2€/kg). ████████ and ████████ took approximately 400kg of steel and 400kg of aluminum from the construction site to sell to scrap dealers. They do this at every construction site they work on and call it a “cadeau de Noël” (Christmas present).

From: France Resides: France

Taryn Simon

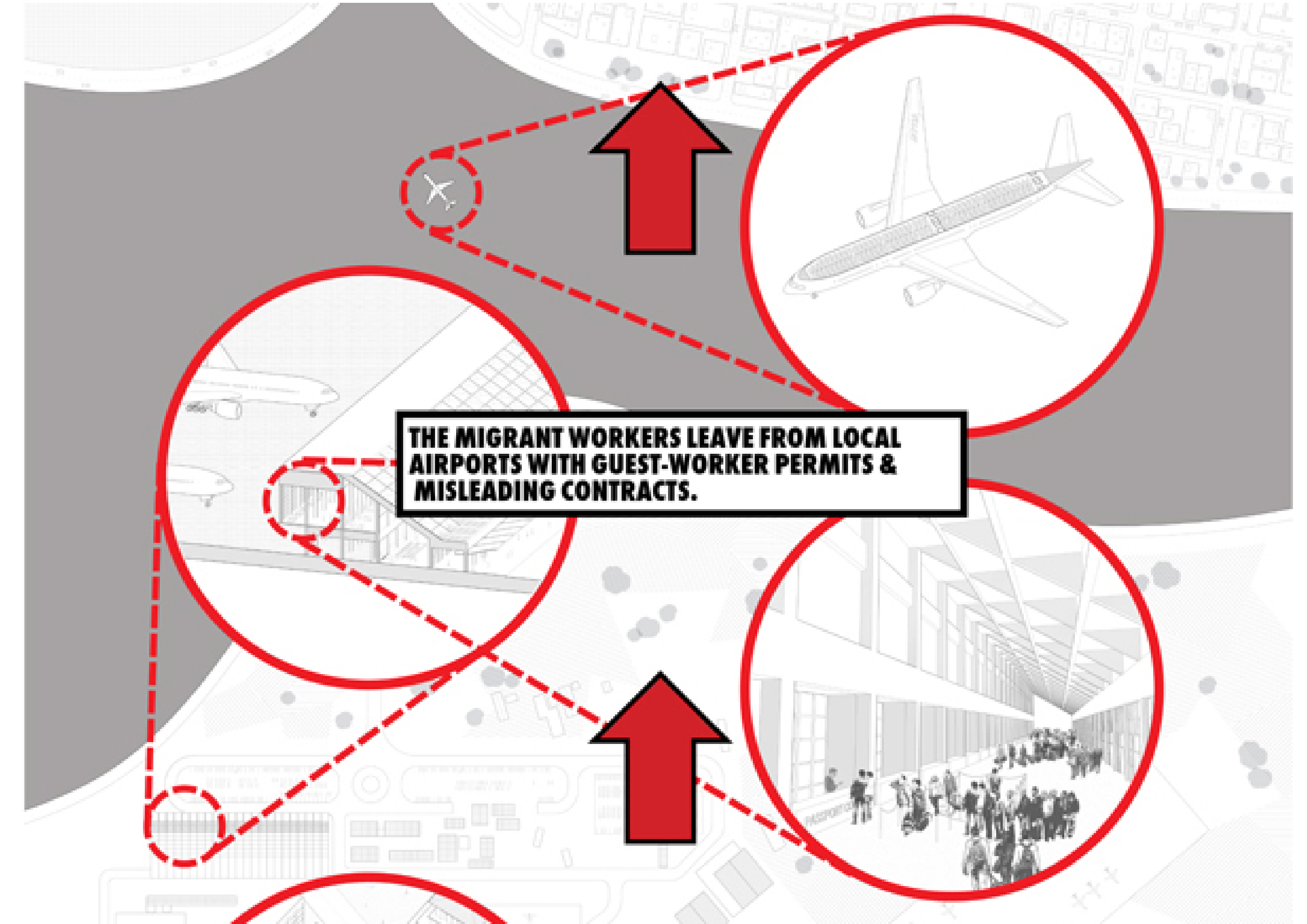
A Polite Fiction

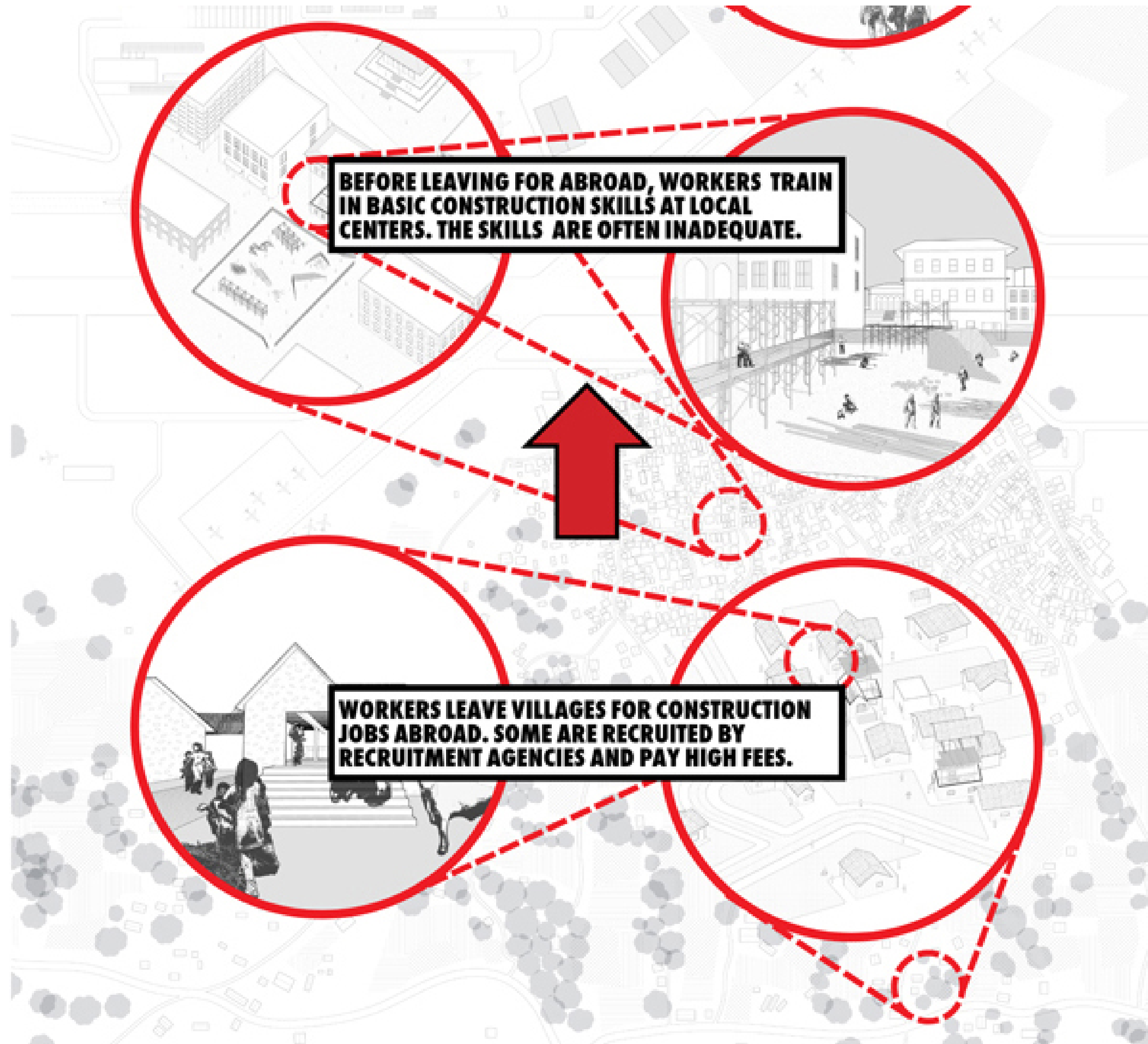
Underneath layers of cement and drywall in the Fondation Louis Vuitton is a message in green permanent marker on concrete: "Oubliez la terre. Elle ne vaut pas le coup ... à moins que vous soyez là pour me sauver" (Skip earth. Not worth it ... unless you're coming to save me).

In A Polite Fiction *(2014), Taryn Simon maps, excavates, and records the gestures that became entombed beneath – and within – the building's surfaces during its five-year construction. Designed by Frank Gehry, the Fondation was built to house the art collection of Bernard Arnault, one of the world's wealthiest individuals and owner of the largest luxury conglomerate in the world. Simon collects this buried history and examines the latent social, political, and economic forces pushing against power and privilege.*

In the part of the project featured in this issue of e-flux journal, *Simon investigates the removal or disappearance of objects from the construction site of the Fondation Louis Vuitton, designed by Frank Gehry. Simon entered an invisible marketplace, tracking, purchasing, and photographing objects taken from the site. Items include copper and aluminum cables sold to scrap dealers; cement used by a father to build the walls of his daughter's bedroom; and an oak sapling that a worker took to Poland, planted, and named after his boss. The custody and movement of these objects transform their value, as they pass from employer to worker and, ultimately, to artist.*

Some geographic details and all of the names in A Polite Fiction *have been redacted.*





architecture, literature, and film in turn-of-the-century Vienna. We presented the freshly restored Beethoven Frieze, which Klimt had created for the first exhibition at the Secession. We restored Klinger's Beethoven sculpture, which had also been on display at the Secession at the time. And we carefully reconstructed Josef Hoffmann's exhibition architecture. We also had a section on Sigmund Freud and the *Interpretation of Dreams* – I wanted to show Freud's couch, but the negotiations were slow-going and we didn't get the loan until two weeks after the exhibition opened, by which time we'd put together a different and very effective installation.

HUO: So you were the exhibition's curator and responsible for the display design at the same time?

HH: Yes, I'd developed the concept together with the Historisches Museum's director, Robert Waissenberger.

HUO: Is there an unrealized project that's dear to your heart, an "unbuilt road"? A project that was too big to build or too small, that was thwarted by censorship or simply fell into oblivion?

HH: There is. I've done a lot of work related to it, but for a wide variety of reasons, I was never actually able to put it into practice: building a philharmonic concert hall, which is to say, a concert hall without an electro-acoustic system. The project that came closest to realization was my design for the Walt Disney Concert Hall for the Los Angeles Philharmonic. After a competition with eighty-two entrants that dragged on for two years, at some point Frank Gehry and I were the last two architects still in the running. The jury met and they couldn't make up their minds, so one night I got a call and was asked whether I would be willing to team up with Gehry. I briefly thought about it and then declined. I told them to award the project to Gehry because the two of us working together seemed like something I didn't want to inflict on Gehry – who's a friend – or on myself. Beyond this project, many things I'm doing today are realizations of old dreams: sculptural buildings (the Generali Media Tower, Vienna; the Centrum Bank, Vaduz); floating buildings (Monte Laa); cantilevered structures (the projecting roof over the Albertina); walk-on buildings (Mönchengladbach); and digging into the ground (Vulcania).

×

Hans Hollein *born 1934 in Vienna, Austria, studied architecture 1953 to 1956 at the Academy of Fine Arts in Vienna, 1958 to 1959 at the Illinois Institute of Technology in Chicago, and 1959 to 1960 at the College of Environmental Design at University of California in Berkeley, USA. Alongside his work as architect and artist, Hollein is active as a curator and designer of exhibitions. Guest professorships a. o. at UCLA and Ohio State University, 1967 to 1972 professor at the State Art Academy Düsseldorf, 1976 to 2002 at the University of Applied Arts in Vienna. Hans Hollein was awarded numerous prizes, amongst them in 1983 the Grand Prize of the Austrian State and in 1985 the Pritzker Architecture Prize. In 2014 he passed away at the age of 80 in Vienna.*

Hans Ulrich Obrist is a Swiss curator and art critic. In 1993, he founded the Museum Robert Walser and began to run the Migrateurs program at the Musée d'Art Moderne de la Ville de Paris where he served as a curator for contemporary art. In 1996 he co-curated Manifesta 1, the first edition of the roving European biennial of contemporary art. He presently serves as the Co-Director, Exhibitions and Programmes and Director of International Projects at the Serpentine Gallery in London.

HUO: The 1968 Architecture Triennale, curated by Giancarlo de Carlo, is an unusual case: it was realized but never seen by the public. Still, it is of special significance in the evolution of your oeuvre because you framed your theses in an extreme way that subsequently proved highly influential. Also, the preparations for the Triennale occasioned many fruitful exchanges between the architects.

HH: Until recently, the Triennale featured national contributions as well as a general section. I designed the Austrian contribution and grappled with the theme of the "Great Number." One point of departure, for example, was snow as a characteristic Austrian mass product. In my installation, the visitors walked down a refrigerated corridor with artificial snowstorms raging on the left and right and noise coming from the floor as though they were treading on snow. There was also a large number of doors people could walk through, including a "frustration door" studded with handles, only one of which worked, and it wasn't where you'd expect it, so people had to try the handles until they found the right one. Another piece was a plastics molding machine set up in the exhibition that I used to make red-white-and-red glasses with temple stems that didn't fold, so people either had to wear them or hold them in their hands or throw them away. This let me expand the installation's scope beyond its physical compass.

HUO: Can you tell us something about the conception behind the "MANtransFORMS" exhibition? In an outline you drew up in 1974, you wrote that the exhibition would not be didactic in nature and was not meant to illustrate a history of design. The goal was instead to trace man's cultural evolution through a focus on design products.

HH: "MANtransFORMS" was held in 1976 and grew out of the 1968 Triennale. The Smithsonian Institution in Washington had set up a National Museum of Design, the Cooper Hewitt, which is now at the Carnegie Mansion in New York. Lisa Taylor, the museum's director, asked me to draft the inaugural exhibition. A competition was held and in the end I was hired to conceptualize and design the first exhibition at the new museum. My plan was to present an expanded concept of design and to explore the question of the significance of design beyond the finished object. This idea evolved into a show about situations in life in which the visitor was confronted with objects, settings, and moods. The exhibition itself was to be the medium that would convey the message, elicit responses, suggest associations, inspire reflections. That's also why the more extensive textual explanations were relegated to the catalogue. One challenge was to integrate the exhibition into the rooms of the Carnegie Mansion, parts of which are protected as a historic landmark. Lisa Taylor was very clear that she didn't want to simply put beautiful objects on display in the museum's beautiful rooms. On the level of content, my conception was based on the observation that we have fixed images in mind that don't match the realities they stand for. If I asked you to draw a star, you'd sketch a five- or six-pointed something, which is what we all think of when we hear the word "star." But a star is actually a sphere, a planet, and looks like the moon or Saturn. Same thing with bread: there's an image of what bread usually looks like. So we put up a display every morning of "daily bread" from all over the world that demonstrated how there are aspects far beyond the round loaf of baked dough that go into what bread looks like: from storage practices – we had crisp breads that were circular discs with a hole in the middle – to the use of bread dough to express sexual symbolism. We wanted to disprove the notion that "form follows function." We also exhibited a wide variety of hammers, from surgeon's mallets to an auto body worker's hammer, which were all based on the same standard form but then deviated from that standard depending on their specific function. Another theme was water as a construction material, and there was an important sequence I labeled "The Metamorphosis of a Piece of Fabric." I moreover invited designers and architects – including Ettore Sottsass, Arata Isozaki, Buckminster Fuller, Richard Meier, Peter Bode, and Oswald Mathias Ungers – to present their view of a subject of their choice.

HUO: That was *le plein* rather than *le vide* …

HH: Yes. We used every nook and cranny of that building.

HUO: For "Dream and Reality," which was on display in Vienna in 1985 and which I saw as a student, you created the interior designs and altered the building's outward appearance as well.

HH: The first time I changed a building's exterior as part of an exhibition was for "Die Türken vor Wien," a show about the Ottoman siege of Vienna in 1683. I put up a small tent on the Künstlerhaus's roof and a larger tent over the whole building. The small tent was in the original size and the large one was scaled up to match the dimensions of St. Charles's Church across the square. For "Dream and Reality," I installed two objects on the Historisches Museum's roof: one hinted at the architecture of Vienna's public housing projects, while the other was a three-dimensional rendition of a figure from Klimt's Faculty Paintings, which were destroyed. The exhibition itself covered the visual arts as well as

architecture worldwide? How can organizational charts be reconfigured to link complex global interdependencies? How can technologies facilitate new relationships between architects, design consultants, and migrant workers who construct buildings? How can architects advocate for better working and living conditions on building sites around the world?

The project team for WBYA? exhibition included Laura Diamond Dixit, Tiffany Rattray, and Lindsey Lee.

– Kadambari Baxi, Jordan Carver, Mabel O. Wilson

Who Builds Your Architecture? (WBYA?) is an interdisciplinary advocacy group that examines the links between labor, architecture and the global networks that form around building buildings. From workers' rights to construction practices to design processes to new technologies WBYA? investigates the role of architecture and architects in promoting fair working conditions and sustainable building practices at building sites worldwide. See www.whobuilds.org (Kadambari Baxi, Jordan Carver, Laura Diamond Dixit, Tiffany Rattray, Beth Stryker, Lindsey Wikstrom-Lee, Mabel O. Wilson).

Jorge Otero-Pailos

Monumentaries: Toward a Theory of the Apergon

1.

Let me propose the neologism "monumentaries" to describe the notion that monuments are not just material documents of the past, but also the expression of a contemporary editorial point of view. Monumentaries are historical buildings that have been purposefully altered post facto in order to influence our perception and conception of them. Any careful observer of historic buildings knows that, in order to keep them standing over the centuries, some measure of alteration is always necessary, but that doesn't make every monument a monumentary. We have to distinguish between alterations due to low-level maintenance, like replacing a couple shingles to fix a leaky roof, and alterations made to express an idea, like replacing a metal roof with clay shingles in order to create a more historically accurate image of the building at the moment of original construction. Only the latter type of alteration, insofar as it is justified by both a technical need *and* an intellectual proposition, is an intentional attempt to turn the monument into a monumentary. Monumentaries are both material and conceptual objects meant to operate discursively in various social, cultural and political realms, as well as disciplines such as architecture, art, history and others. I will focus in particular on the material that is added to monuments in order to transform them into monumentaries. This material, while often presented as a purely functional repair meant to be invisible, or at least dismissible, is in fact a very important aspect of the aesthetics of monumentaries. As modifying aesthetic, it also operates as a conceptual supplement, able to reconfigure, sometimes slightly, other times completely, the ideas previously associated with the monument. While material supplements to monuments are typically intentionally obvious and easy to see, their conceptual status is paradoxically rather difficult to decipher. Building on Derrida's analysis of artistic *parerga*, the supplements described in Kantian aesthetics, I will argue that monumentaries are created through supplements that are both the same and different than those at work in other artworks: the same in the sense that they are conceptually extrinsic to the work, materials that need to be removed in order to appreciate the work, but paradoxically indispensable and therefore constitutive of it; different in the sense that they are meant to physically and conceptually protect and preserve the work for the future. What follows is an attempt to refine the concept of the supplement as it pertains to architecture by theorizing the *apergon*, the part of architecture that protects it until it will have been fit to stand on its own, that is to say fit to be understood.

the metaphorical volcano, are underground. I designed an artificial crater into which people would descend before emerging back into daylight at another location. In this way I wanted to illustrate not only the destructive nature of volcanoes but their life-giving aspect as well: their eruptions leave highly fertile soil behind. We also used a wide range of media. There's an IMAX theater with a sixty-six-foot-tall projection screen where footage of volcanic eruptions is shown. So we tried to address the visitors in diverse ways, also taking into account the different age groups and educational backgrounds. The museum and park are fun for a child to roam, but they also present information that's of interest to scientists.

HUO: And you're appealing to all five senses!

HH: Yes, that was also an aspect of our conception. We work with sulfurous odors, the rumbling of volcanoes during eruptions, and the visual presentations. But there are also highly reduced and abstract visualizations and objects.

HUO: You're planning another museum inside a mountain for Salzburg.

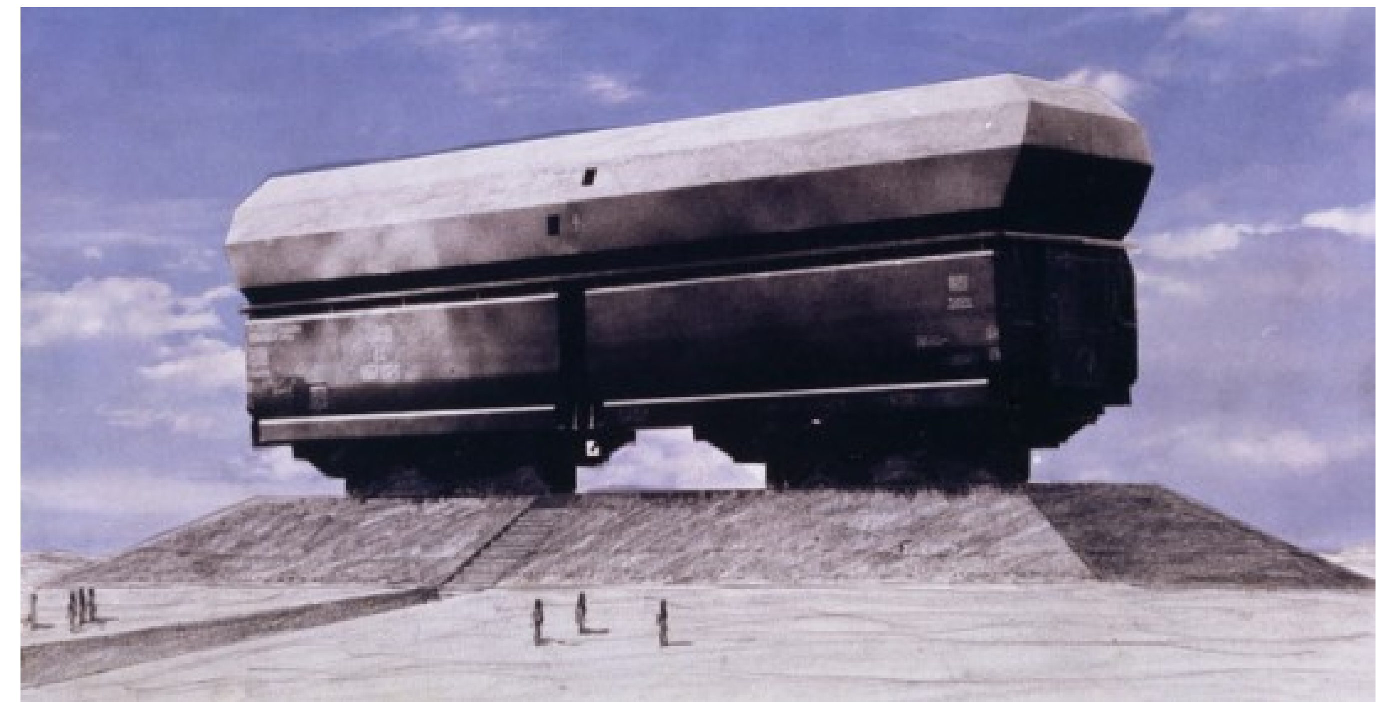
HH: The projected building, which grew out of a competition I won, is the subject of talks about a possible collaboration between the Kunsthistorisches Museum in Vienna, the Hermitage Museum in Saint Petersburg, and the Guggenheim.

HUO: In which way does the expanded concept of art play a role in your work? Is there an analogous expansion of the concept of architecture?

HH: Work that thinks outside the box has always been important to me. I advocated such an expansion early on, in 1960, in my manifesto "Architecture Is in Exile Now." I've also said things like "Everything is architecture!" – things that spoke exactly to this point. One implication is that architecture should avail itself of other media as well. Architecture is more than building in stone. To bring certain points home, I have to bring in other media. For example, I can make spaces larger or narrower also by changing perceptions. I once envisioned pills, like those used to treat claustrophobia or agoraphobia, that would let me experience a space that needn't exist as a physical structure. My design for a new lecture hall complex for the University of Vienna consisted of a photomontage of the university's existing buildings in combination with a monitor – my argument was that no new lecture halls needed to be built because the necessary enlargement could be implemented through the use of media.

HUO: With your exhibition conception "Selection 66" for MAK in Vienna you explored an expanded concept of design. How did you implement your approach in the exhibition design?

HH: With a conception that redefined the idea of the "exhibition."



Hans Hollein, *Monument for the Victims of the Holocaust*, 1967.

cladding." To which I responded, "It's great to hear that you've got that much money left. I can think of other places where that'll come in really handy." After the new building in Mönchengladbach opened, many architects hired to design museums followed its example: from Cologne's Wallraf-Richartz-Museum to Frank Gehry's building in Bilbao, sheet metal–clad museums are a common sight today. I should also note that the building in Mönchengladbach was the result of a very interesting constellation. Mönchengladbach was a fairly undistinguished city at the time, with a mixture of provincials and very open-minded people. It was an ordinary municipality that underwrote the project, rather than a wealthy private patron.

HUO: Could you describe your design for Saint Louis in more detail?

HH: I was brought in to do it by Emily Rauh, the future Emily Rauh Pulitzer, who was the curator at the St. Louis Art Museum. The museum owns an eminent collection of Expressionist paintings. My idea for the experimental museum was to construct an installation where the visitor would take a seat and press a button to set a rotating disc in motion on which original works of art – sculptures and paintings – would be mounted. That way he or she would have a very individual experience of selected artworks. The inspiration came from Japanese museums, which have boxes in which exhibits are held – they get taken out and then put back.

HUO: What do you think of Wolfgang Pehnt's theses, also with regard to contemporary museum architecture? He conceives architecture as collage and emphasizes the heterogeneity of museums.

HH: I don't think the term "collage" is quite right. I think that collage is an artistic technique which, on its face, has nothing to do with museum architecture. For example, in my collages – I also use the term "transformations" – the point was to take an object that had a specific meaning and transpose it into another meaning or add a further meaning to it. That's also a phenomenon Claes Oldenburg was interested in when he worked on objects like the "giant lipstick." Another aspect is that collage can be a way to represent something with very simple means. The concept of heterogeneity seems more applicable to the character of the building in Mönchengladbach. The entrance is a metaphorical museum-as-temple. The saw-tooth roofs, on the other hand, were the cheapest way to bring daylight into the galleries, a structural element I took from the textile industry. In the conservator's perspective that was a gamble, because the widely shared

conviction at the time was: the more artificial light, the better. But we decided to get as much daylight as possible into the museum and looked to turn-of-the-century museum buildings for models. Regarding the internal layout of the galleries, the museum in Mönchengladbach is best described as a three-dimensional matrix. It's not a museum with a fixed sequence of rooms; the visitor can take very different paths through it. I enter the building along a diagonal and have four options. For example, I can chart my route follow a rough chronology or go by artistic schools or motifs. This open arrangement of the galleries accommodates modern contemporary art with its rejection of chronological series. It allows for exhibitions that highlight the complexity of the creative approaches that coexist at any point in time. The same applies to the museum in Frankfurt, which also features very different rooms: galleries with skylights or sidelights, ones that are dark, as well as round and angular rooms. It lets each work of art find its place and gives the visitor the freedom to devise his or her own way through the exhibition. I also think a museum is not an erratic block; it's a building for the community to take possession of.

HUO: You designed several important environments in the early 1970s.

HH: Yes, for example at the Venice Biennale, where I was involved as a visual artist.

HUO: You exhibited rituals.

HH: The Biennale's theme was "Work and Behavior. Life and Death. Everyday Situations." I paraphrased it by showing everyday spatial situations, making tile objects, and putting up a tent with a stretcher.

HUO: Are your current projects the realizations of earlier utopian ideas?

HH: Yes. I've always tried to bring many of my ideas to fruition eventually. Projects like "Monte Laa" in Vienna with the two towers or "Vulcania" have a lot to do with what I did between the late 1950s and the early '70s.

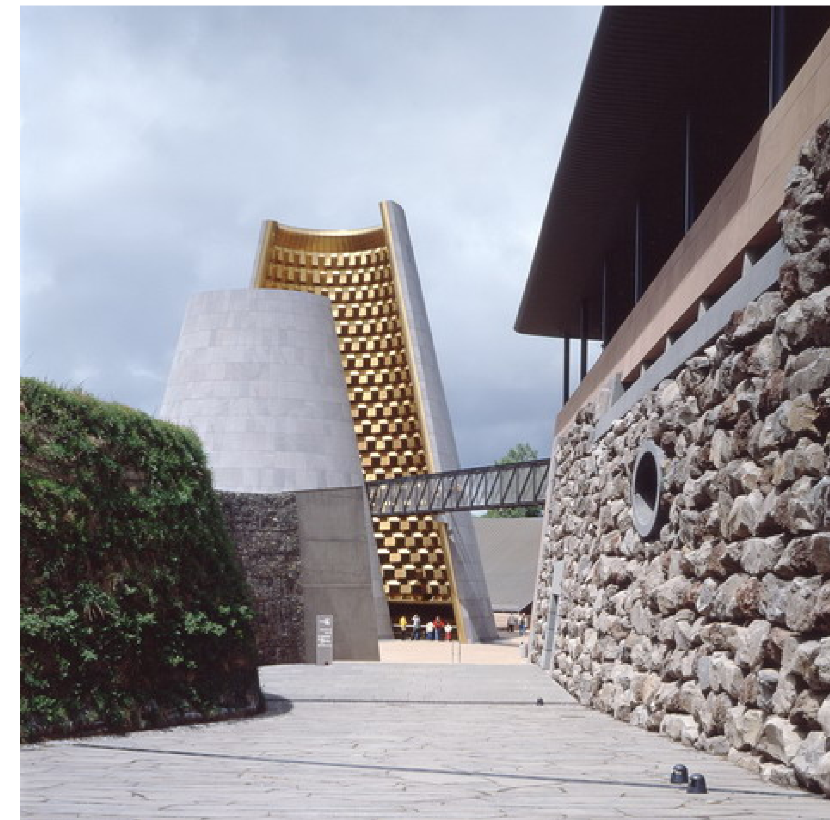
HUO: "Vulcania" is a highly unusual museum.

HH: "Vulcania" is a museum and theme park. An international competition was held and the project caught my interest because there'd never been a museum dedicated to volcanism. I took part in the competition and tried to come up with an idea that would hold the project together. This was actually an instance where I worked with a collage. In addition to the usual detailed plans, I made a collage out of Gustave Doré's engravings illustrating Jules Verne's *Journey to the Center of the Earth* and Dante's *Inferno*. The collage visualized my underlying idea: a descent into the interior of the Earth. That's why all spaces, with the exception of the restaurant and

Limestone supplements frame the original stones of the ancient Roman theater in Arles, France. Photo: Jorge Otero-Pailos.

Supplemental brick scenae frons and Tudela stone cavea seating frame the original stones of the Roman theater in Sagunto, Spain. The design by Giorgio Grassi and Manuel Portaceli was completed in 1993 and received with much criticism. Photo: Iniguez Rodriguez Enrique, Wikimedia Commons.

Hollein superimposes the Rolls-Royce Grill on Wall Street in this collage from 1966. Collection Barbara Plumb, New York.



The Vulcania Museum (2002) in Saint-Ours-Les-Roches, Auvergne, France, appears as a sectioned volcano in this view.

a very progressive architecture institute at the time where Aldo van Eyck, Frei Otto, and others were teaching.

HUO: So the press response to your first exhibition at Galerie nächst St. Stephan and the catalogue really set your career in motion.

HH: I've always seen the medium of writing about exhibitions and catalogues as an important multiplier. In this case, it allowed me to spend another year in the United States, where, besides teaching, I pursued my projects further. When I returned to Vienna, I decided to set up shop as an architect. In 1964, Mr. Retti, a manufacturer of candles, asked three architects to submit proposals for the design of a small store, just 150 sq. ft., on Vienna's Kohlenmarkt and chose my design. The shop was completed in 1965, and in 1966, it received the R. S. Reynolds Award, then the most highly renowned architecture award. My design competed against skyscrapers by Yamasaki.

HUO: Apparently the store's microstructure really impressed people!

HH: When Bakema saw it, he said, "But that's a built manifesto!" And it was, because it wasn't just a shop, it was an architectural statement. Which was very much my intention. I'd forgone the conventional shop window and divided the unit into two rooms: an exhibition space and a walk-in storeroom. To make up a bit for how small the space really was, I constructed a little passageway that led into the aluminum-clad display storeroom. Two mirrors facing each other formed a transition from the real to the virtual architecture, and for a brief moment, you got the impression of an infinite space. The shop was also a statement on the use of novel materials. I glued the aluminum panels on, a technique that had been virtually nonexistent – I'd been supplied with information on how to do that by the British Aircraft Corporation – and took inspiration from cable-car gondolas for the curved shapes. So the project was a superimposition of different intentions, and many people recognized the way it lent itself to multiple readings.

HUO: Display design for shopping environments has been in focus again lately.

HH: True. Rem Koolhaas is working in that field today. At the time, the majority of the responses were disparaging, along the lines of, "an architect who's doing a store obviously isn't getting any major commissions." After I'd finished the candle shop, I was hired to design several more shops and turned each into another statement, sometimes with different emphases. But ephemeral architecture, like shopping displays and trade-fair booths, was seen as less than respectable. The advantage, to my mind, was that the clients were bolder and more willing to experiment than those who had major commissions to award. For example, I outfitted one boutique with an interior made of synthetic materials. A year after I'd designed the candle shop, Beuys knocked on my door in Vienna and said, "You've got to become the new architecture professor at the Düsseldorf Academy of Art!" We spent two days together. My candidacy was supported by the artists and opposed by the architects, and eventually, in 1967, I was appointed professor of architecture.

HUO: The next field you then went into was museum architecture.

HH: Yes, that was something no architect was interested in at the time. Museums were seen as fusty institutions. On the recommendation of Monsignor Mauer, the director of Galerie nächst St. Stephan, I was invited to do an exhibition in the old building of the municipal museum in Mönchengladbach, which had recently held the first Beuys exhibition. Johannes Cladders, the museum's director, wanted me to create the new building. But first I designed Richard Feigen's gallery in New York. Feigen had bought a house in 1967 and wanted to convert it into a large gallery and private residence. He presented an exhibition at his old gallery entitled "Macrostructure" that included work by Claes Oldenburg, Frei Otto, Christo, myself, and others. When I came to pick up my exhibits after the show closed, Feigen and his secretary said to me, "We didn't know that you're also an architect who can build. We thought you were only an artist. So why don't you do our new gallery?" That's how one thing led to another. In the meantime, I also drafted an experimental museum for Saint Louis, though it was never built. Eventually, Cladders, the director of the museum in Mönchengladbach, proposed to the city's authorities that I should design the new building. The objection was of course that I'd built virtually nothing. But in the end they came around and chose me. I just thought it was wonderful that a city like Mönchengladbach, with a population of 170,000, was spending its own money to build a museum for contemporary art. Needless to say, the process was time consuming: first an urban-planning study was commissioned to determine the exact location of the new museum. The earliest concrete plans were drawn up in 1972, and the building was inaugurated in 1982. The only new museum buildings in Germany at the time were Philip Johnson's museum in Bielefeld and the Lehmbruck Museum. The building in Mönchengladbach was the first museum clad in sheet metal, a titanium-zinc alloy. When I presented the idea to Mönchengladbach's city council, the members said, "Sheet metal? We're on a tight budget, but we can afford stone

2.

As in film documentaries, architectural monumentaries must strike a careful balance between staging historical evidence objectively and presenting the filmmaker's or the architect's subjective editorial point of view. In the ruins of the ancient Roman theater of Arles, France, the editorial point of view of the contemporary architect appears as an attempt to present a speculative image of what the ground-level arcade of the theater's façade might have looked like when it was originally built in the first century BCE. Pedestrians walking the perimeter of the theater, along the Rue de la Calade, are presented with a white iron fence placed along the exact location where the ancient façade once stood. A few blocks of limestone that were clearly the base of the façade interrupt the fence. As the visitor nears the northwest corner, these blocks rise up and turn into a one-story wall with three arches flanked by Doric pilasters. The limestone ashlar is crisply rendered, suggesting that it was laid more recently, during a major restoration campaign carried out at the end of the nineteenth century, and retouched between 2005 and 2009.

Interestingly, the hand of the architect, the editorial expression, recedes at key moments – for instance, in the case of the new ashlar that stops short of covering the whole surface of the wall in order to reveal remnants of weathered ancient stones. The new stones frame the historic evidence, staging it for us to appreciate as an "untouched" document of the past. The need to show these original stones cannot be overstated: they are the objective historic documents that legitimate the contemporary work being expressed next to them. Yet paradoxically, their status as documents of ancient Rome is not clear prima fascia. Their deformed shapes and lack of carvings make them partially illegible as historic evidence. The stones alone cannot perform their appointed task as legible, unaltered documents of the past. They require a supplement, an explanation, an expert opinion, an editorial point of view, which the surrounding restoration is there to provide: if the weathered stones appear framed by a partial replica of a Roman theater, then the visitor is gently predisposed to read them as ancient Roman stones. After a visit to Arles circa 1905, Sigurd Curman, Sweden's influential National Antiquarian, praised the "sensibly and instructively executed supplementary works which identify themselves clearly without spoiling the overall impression of the monument."[1]

The physical building material that makes up monuments can sometimes be an opaque document – difficult to read. Precisely this opacity legitimates the need for a contemporary supplement that will illuminate its meaning – document and supplement are mutually constitutive. But the supplement, by definition, needs to appear secondary to the document, even if without it the document cannot function as such. So contemporary architects have to pour a great deal of creative effort into making their work appear reversible and unobtrusive, even if, in the case of the Arles Theater, it would be physically impossible to separate the new stones from the ancient Roman ones without inflicting some degree of material damage to the latter.

Monumentaries are characterized by their dual nature as both documents and supplements, and by the tensions within the work that this duality creates at the aesthetic and conceptual levels. Monumentaries are works of architecture, but they defy some of our expectations of what architecture is. We are accustomed to appreciate architecture and artworks as objects that "hold together" as unified aesthetic experiences. But monumentaries often appear disaggregated aesthetically, with their supplements being only punctually expressed. In other words, the supplement does not necessarily bring together the fragments of the original work under a unified aesthetic. In this sense monumentaries are close to documentaries, where the point of view of the director is (usually) only overtly introduced at key junctures in the film. Whereas a typical fiction film is completely subsumed in the aesthetic vision of the director, in a documentary the director must try both to reveal his or her creative license more obviously and to conceal it more cunningly. Directors of documentaries and architects of monumentaries have to overtly call attention to their hand in order to give the reassuring appearance that the rest of the film or building has not been tampered with and that therefore, on the whole, it can still qualify as evidence. The supplement, in other words, must be so highly visible, so incredibly obvious, as to be ignorable, something we can mentally remove from the work itself. The supplement in a monumentary functions like the stage in a play. Its obviousness is the enabling element for the necessary suspension of disbelief. This practice of making the supplement apparent was canonized in the 1964 Venice Charter, which demanded that every supplement to a monument "be distinct from the architectural composition and must bear a contemporary stamp."[2]

3.

But how do we know if we are expressing a

supplement too obviously or too indistinctly? Let's look at an example that has been condemned for being excessively obvious: the monumentary created by architects Giorgio Grassi and Manuel Portaceli at the ancient Roman theater in Sagunto, Spain. The ruins that remained in the 1970s were mainly the three tiers of *cavea*, or semi-circular rows of seating. The *scaenae frons*, or high enclosing wall behind the stage, was entirely missing, save for the foundations.

Grassi and Portaceli wanted to create a monumentary that would convey the original architectural experience of an ancient Roman theater. They were designing in 1985, during the years of postmodernism, at the height of the Italian school of typological urban morphology, which Grassi, Gianfranco Caniggia, and Gian Luigi Maffei helped shape, and which Aldo Rossi and Rafael Moneo disseminated internationally.[3] In order to express the ideal of the Roman theater building type, Grassi and Portaceli thought it essential to construct a new wall behind the stage as high as the original *scaenae frons*. They were very careful to make it very obviously contemporary, building it out of unadorned yellow brick to differentiate it from the original grey stone. Following the standard archeological practice of anastelosis – a term initially describing the re-erection of the fallen stele around Greek temples – they inserted some remaining ancient fragments into the new brick wall in order to give a sense of how highly ornate the original *scaenae frons* would have been.

Despite the architects' attempt to follow convention and render the supplement in an obvious fashion, the project was heavily criticized immediately upon completion in 1993. Preservation architect Antonio Almagro protested: "The contemporary spectator or visitor that enters the space of the theater will find that, of the surfaces presented to his or her sight, not even a fourth part are original Roman remains."[4] The supplement seemed to him too obvious and too overwhelming of the original. It was so present that it could not be ignored, or imagined away. Such was the uproar that the socialist municipality was taken to court by the opposing conservative party.

After decades, the Spanish Supreme Court decreed that the supplement had to be physically removed and the theater returned to its "original state."[5] Arguably, this original state was precisely what Grassi and Portaceli attempted to express in their project. But the Spanish Law of Cultural Patrimony forbids

Supplemental plexiglass seating over the original stones of the Greek Theater at Heraclea Minoa, Agrigento, designed by Franco Minissi (1960–63). Left: as built in 1973. Photo courtesy of C. Bellanca. Right: The first level of bleachers with breaking laminate and greenery infestation, 2000, (N. P. Stanley-Price, J. Jokilehto, "The decision to shelter archaeological sites: Three case studies from Sicily," *Conservation and Management of Archaeological Sites* no. 5, 2001: 19–34).

Hans Hollein, Museum Abteiberg, Mönchengladbach, Germany, 1982.

Hollein's interior design for the Marius Retti candleshop (1965) won the R. S. Reynolds Award that year.

Erechthion's caryatid column stands in the Acropolis Museum, Athens. Photo: Jorge Otero-Pailos.

reconstructions in new materials, and only permits reconstructions based on the anastelosis of original fabric. Despite the supplement's clear appearance as something extrinsic to the work, it proved to be impossible to extricate from the ruins. In 2009, the Regional Supreme Court of Valencia argued it was physically, legally, and financially impossible for it to carry out the orders of the Spanish Supreme Court.[6] So the supplement still stands.

Almagro's emblematic critique further cues us to the paradoxical status of the supplement: it must be obviously expressed but also appear insubstantial, in both senses of the word, as a material that can be seen through and that is meaningless. This insight has led some creators of monumentaries to experiment with transparent materials, like glass and plastics. Architect Franco Minissi became well known for his transparent plastic supplements, especially his coverings of the *cavea* of the Greek Theater at Heraclea Minoa (Agrigento, 1960–63).[7] But the norm, as we've seen in Arles and Sagunto, is for supplements to be expressed with opaque materials. Using visual techniques such as "phenomenal transparency,"[8] opaque supplements can achieve disappearing effects, by carefully matching the original's regulating lines while completing its missing volumes in order to create the sense of continuity, overlapping fields, depth, and so on. When taking in the monumentary as a whole, supplements appear as a material through which we can glean or imagine aspects of the original that are in fact not there.

4.

Done properly, the supplement confounds, blurs the line between reality and fiction, and allows us to suspend disbelief, to satisfy our desire for meaning, to see what we want rather than what is before us: to experience the monumentary as unassailable documentary evidence of the past. The supplement plays on our human propensity towards binary thinking: its materiality is so overdetermined as something artificial and meaningless that it makes everything else around it, namely the original, appear authentic and deeply significant.

Monuments without supplements are rare, and for a reason. Recently, a municipal maintenance team discovered a rare unsupplemented six-thousand-year-old Celtic tomb in the Galician village of Ardesende, in northwestern Spain. They confused it with an old picnic table with broken benches, and with the best of intentions, demolished it and replaced it with a new table and benches, made of shiny new polished granite slabs to meet the standards of the most exacting picnicker.[9] The site had been documented by archeologists and was officially listed as a Resource of Cultural Interest, but it was never supplemented. Without a supplemental treatment, the monument could not be recognized as such: it was invisible to the untrained eye.

Similar cases abound of untreated monuments being misidentified as insignificant objects. In 2013, Belizean construction workers tore down a 2,300-year-old Mayan temple they mistook for a pile of rubble to make gravel for road filler. Dr. John Morris of the Belizean Institute of Archaeology suggested the workers were being disingenuous: "There is absolutely no way that they would not know that these are Maya mounds."[10]

Ambiguous legibility threatens the existence of monuments. In order to recognize something, we must by definition have seen it before. This means that it would be theoretically impossible for us to identify a construction we had never seen before as a monument. To survive, they must unequivocally appear as monuments. Supplements are meant to help monuments do what we expect them to do but cannot do by themselves: to appear as monuments. This is their primary role: to impose conventional attributes upon the extraordinary objects that will render them recognizable as monuments, that is, as evidentiary documents of the past.

5.

For any object to be considered evidence – for it to enter a courtroom, for instance – it must first be prepared according to protocols accepted by the court. Scientific techniques supplement the object, collaborate with it, and support its claim to evidentiary status. Evidence is therefore never free of some degree of necessary manipulation – a fact well known to forensic experts. As Eyal Weizman reminds us, forensics is the application of scientific methods and techniques to objects such that they may be recognized as evidence in *forensis*, the Latin word for an open court.[11] At some rudimentary level, the public is aware of this artificial contrivance through the media coverage of, for instance, celebrity court cases. Preservationists too use media to make the public aware that the monuments they visit have been treated in some way. Think of the ubiquitous panels planted in front of monuments to explain what elements have been replaced and with what techniques. Even though they are not physically on the historic object, such panels and other related media are also its supplements, essential to helping it appear as a monument.

Every discipline has its supplements, but only some have turned the supplement itself into

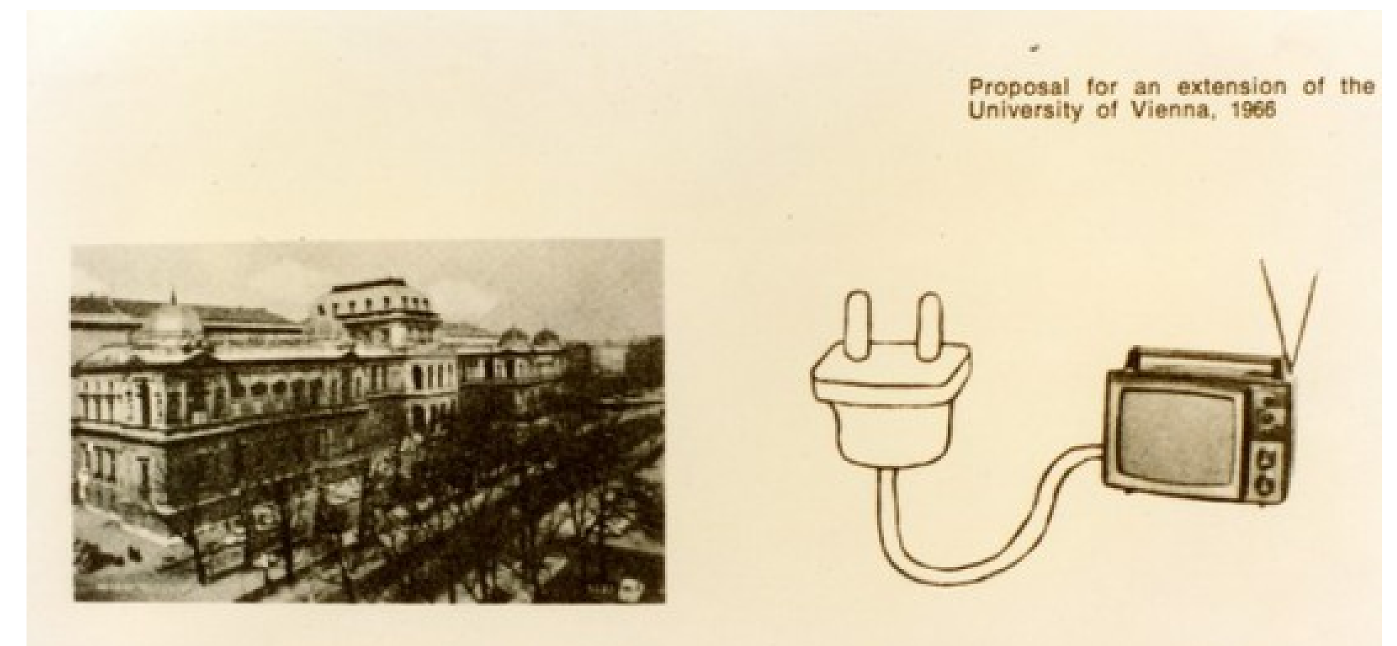
architecture. So I drove to Los Angeles to see more of his buildings and take photographs. I met his widow and his former lover, who introduced me to his circle of friends. Schindler himself had died in 1953. I brought out the first books about Schindler in 1960 and 1961. I also obtained access to his archive, which was stored in his son's garden house. All his drawings were there, in big stacks, with the models sitting atop them, and I was able to document some of that in photographs as well. I took the material to the Museum of Modern Art in New York, gave them an introduction to Schindler's work, and suggested that they should preserve his archive. They replied that Schindler wasn't important. Then, in 1964, I also published an article on the pueblo in which I discussed the basic principles and the complexity of this architecture and its interaction with the landscape and nature.

HUO: These were the beginnings of your work as a documentarian?

HH: Yes, but I never planned on becoming an architecture historian or critic. I called my publications on Schindler a "contribution to a corrected architectural history." Same with my work on the Viennese architect Josef Hoffmann: When I was a student, in 1954–56, art historians had lost sight of his significance. You could pick up furniture designed by Hoffmann at estate sales and from dumpsters. Drawings by Klimt and Schiele went for ten dollars apiece. I thought it was my duty to restore these pioneers of modernism to their rightful place in art history. But my work as a writer never took precedence over my own creative activities. In today's parlance, what I was doing at the time, especially in my environments, would be described as crossover. Take, for example, my early drawings and collages from the late 1950s and early '60s, which were acquired by the Museum of Modern Art. In Berkeley, I did a master's thesis on "Space in Space in Space," a subject I examined in texts, drawings, and models of various sizes. After coming back from the US, I gave a lecture on my works and ideas. To my mind, I was a sculptor much more than an architect. In 1963 I presented my work in a joint exhibition with Walter Pichler at Galerie nächst St. Stephan.

HUO: Was that your first exhibition?

HH: No. In 1959, I'd done a modest show of work related to my thesis and other pieces I'd created during my time in the US. And I'd put together a small exhibition on Schindler at the Museum of Applied Arts (MAK) in Vienna in 1960. But the show at Galerie nächst St. Stephan in 1963, which was on display for all of three days, was the first presentation of my art. It elicited a very intense reaction. People rushed into the gallery determined to destroy the models. The *Kronen Zeitung*, an influential tabloid, launched a massive attack as well. Although the exhibition closed after a few days, it triggered a fundamental shift in the situation in Vienna at the time. It was also documented in a little catalogue. The Museum of Modern Art got in touch and purchased some of the exhibits, and I was offered a visiting professorship at Washington University in Saint Louis, which had



A study for an extension of the University of Vienna designed in 1966 by Hans Hollein.

Hans Ulrich Obrist

In Conversation with Hans Hollein

Hans Ulrich Obrist: You've frequently worked at the junctures between art and architecture. Could you tell us about your early work in exhibition design as well as exhibitions of your own art?

Hans Hollein: My earliest endeavors in that direction date to 1956, when I'd completed my architecture studies at the Academy of Fine Arts in Vienna. I hadn't received any commissions, but I started to develop ideas. My first studies for a purposeless or – my term at the time – absolute architecture were located on the boundary between architecture and visual art or, more specifically, between architecture and sculpture. I never believed in a neat division between architecture and the other visual arts. I fleshed out my ideas in drawings and models and then won a fellowship to go to the US for two years. I used the time to study at the Illinois Institute of Technology in Chicago and get a master's degree at Berkeley.

HUO: Who were your teachers in Chicago?

HH: I started studying with Mies van der Rohe, but soon after I got there he withdrew from the IIT due to internal differences, although I continued to see him privately. I then took urban planning classes with Hilberseimer and Peterhans. In my second year, I moved to California. But the real main purpose of my stay was to work free of constraints and really get to know America. I logged around sixty thousand miles driving around the country, with a wide variety of intentions and research foci. For example, at one point I went on a trip to visit every Vienna in the US. I also looked at every single building by Frank Lloyd Wright. That was when I was first confronted with the reality of his designs. I'd known his architecture only from photographs, so the three-dimensional reality was very imposing. I looked at everything he'd done, down to the pigpens he'd built in Alabama. Shortly before his death, he invited me to come up to Taliesin in Wisconsin for a weekend. Another subject I was interested in very early on was Native American architecture. I went to the Southwest several times to study the pueblos more closely.

HUO: Did you document your research?

HH: I accumulated around two thousand slides, a pretty extensive collection. The University of California wanted to buy it, but I declined their offer. Unfortunately, almost all the slides were stolen from my car three days before I flew back home. All I was left with was a series of pictures of Schindler's buildings I'd deposited at the Museum of Modern Art. I'd seen a photograph of Schindler's Beach House in an old issue of *Architectural Record*, which made a big impression on me. I asked around, but no one in my acquaintance knew anything about the

The *apergon* of the Propylaea at the Acropolis protected the stones during transport and construction and was meant to be struck from the work in a future that has yet to come. Photo: Jorge Otero-Pailos

their central endeavor and benchmark of creativity in the way that preservation has in the production of monumentaries. The annals of preservation theory are filled with treatises and reflections on how to best express supplements. The same is not true in painting, for instance. Painting theory relegates supplements to the margin. The frames we put on paintings help to supplement them by establishing a clear inside and outside of representation. They draw the line between what we should attend to and what we should ignore, what is intrinsic and extrinsic to painting.

One could say, following Jacques Derrida, that the very idea of painting rests on the notion of the frame.[12] Derrida's philosophical analysis of the constitutive role of frames in paintings was all the more significant because art theorists had not seriously examined frames up to that point; in fact, they continue to mostly overlook them. Painters still don't design frames. It is worth mentioning, however, that at some point after World War II painters realized that the frame – especially the wrong frame – could completely alter the reading of their work. They have since pushed to have their paintings hung frameless.[13]

Derrida named the frame the *parergon* – from the Greek *para*, that which is next to the *ergon*, the work. "A *parergon* comes against, beside, and in addition to the *ergon*, the work done (*fait*), the fact (*le fait*), the work, but it does not fall to one side, it touches and cooperates within the operation, from a certain outside."[14] The *parergon* is a supplement to the existing work, a treatment that refashions it slightly, enhances it, helps it achieve the presence and meaning it should have but cannot attain alone.

Derrida's description of the *parergon* doesn't fully capture the nature of the supplement in monumentaries. To be sure, monumentary supplements also refashion the work, physically and conceptually. Like the frame of a painting, monumentary supplements also are the work. They are also shot through with an ambiguous status: they might or might not be considered part of the work. Monumentary supplements also operate conceptually on the work from "a certain outside." But physically, they are part of the work and protect the work from further decay. In this sense their belonging to the work is not merely rhetorical. Monumentary supplements cannot be physically removed without letting the monument incur significant damage, even total collapse. Monumentary supplements do not, as is often claimed, reconstruct the work. Rather, they obstruct it. The word "obstruct" shares the Latin word *struere*, meaning to build, with construction; but it carries a different Latin prefix: *ob-*, meaning against. It is a buildup against the work that holds up the work, like the scaffolding against a wall.[15]

As an obstruction, the monumentary's supplement delays our gratification, postpones conclusive meaning. But it does not deny it. It simply stands in the way of it, holds it in abeyance for a moment in the future anterior, when the monument will have been understood without supplements. The supplement therefore casts itself as a part of the work that must be removed in order to illuminate the work, to fully grasp it. In ancient Greek architecture, this part of the work was called the *apergon*. A building's blocks of ashlar were delivered to the construction site unfinished, with rough surfaces. These extra few centimeters were meant as a protective covering for the stone during transport and installation. Once the stone was safely installed, the *apergon* was struck from the stone as the surface was rendered and the architecture revealed. Perhaps the world's most famous *apergon* is the southern wall of the Propylaea, which was never removed because of the drain on Athenian coffers of the Peloponnesian War of 431 BCE. Starting especially in the Renaissance, the *apergon* was recognized as beautiful in itself and aestheticized as rustication on buildings of all sorts.

To recognize the monumentary supplement as the work's *apergon* is also to move beyond the tendency in preservation theory to analyze historic buildings according to false dichotomies that divide their fabric into parts: one being intrinsic original documentary evidence and the other cast as extrinsic, derivative, contemporary interpretation. It will bring us closer to grasping monumentaries for what they are rather than what we desire to see them as, and to appreciating the contemporary forms of expression alongside the pasts that they spawn, and the futures they help fabulate, rather than continuing to insist on the traditional concept of the monument as an immutable relic of the past.

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All photographs appear courtesy of the author unless otherwise noted.

1
From the poem "Lu Zhai" (The Deer Enclosure) by the Tang-dynasty poet Wang Wei (701–61). Here is the complete poem:
Desolate mountains, no one in sight,
Only echoed voices carry to me.
Fading light filters through forest depths,
To glance upon the moss again.
(*Trans.*)

2
Ezra Pound, "In a Station of the Metro."

3
The tunic suit (*Zhōngshān zhuāng*) now known in English as the "Mao suit" is in fact named in Chinese for Sun Yat-sen (also known as Sūn Zhōngshān), as it was he who conceived the design in the early twentieth century. Inspired by the style of coat worn by Vladimir Lenin around the time of the October Revolution, the "Lenin coat" (*Lièníng zhuāng*) was popularized as a gender-neutral women's garment following the founding of the People's Republic of China in 1949. (*Trans.*)

4
From "Model as Reality," in *Olafur Eliasson: Never Tired of Looking at Each Other – Only the Mountain and I* (London: co-published by the Pavilion, Beijing, and Koenig Bookshop, 2013).

5
Regarding homeopathy, the German philosopher Peter Sloterdijk, when asked in an interview about the influences on his thinking, responded by discussing Samuel Hahnemann, the pioneer of homeopathic medicine in Germany, and his emphasis on the importance of experimenting on one's self. Hahnemann believed that in order to become a doctor, one must first learn to become the test subject.

6
As quoted by Toyo Ito, Fujimoto's "weak architecture" is the notion of "not making architecture from an overall order but from the relationships between each of the parts, [with the result that] an order can be made that incorporates uncertainty or disorder." From "Casting Off 'Weak Architecture,'" in *Sou Fujimoto: Primitive Future* (Tokyo: Inax, 2008).

this integration, compared to which contemporary architecture is more superficial in its emphasis on program.

It is perhaps no accident that the title of this essay contains within it an echo of Le Corbusier's *Towards a New Architecture*. Fujimoto's short text, "Nest or Cave," from his early publication *Primitive Future*, has had a major influence on me – you could even say it is an essential entry point for understanding Fujimoto's architectural thinking. In the text, Fujimoto arrives at an image of the "primitive future" through a comparison between Le Corbusier's archetype of the "nest" and what Fujimoto believes to be the more primordial form of the "cave": a form that returns architecture to its origins. If the "nest" is built in response to the needs of its inhabitants, and the design of its space determined by function, its spatial design also regulates the modes of daily living and use of its inhabitants, whereas the "cave" is not pre-designed for the sake of its inhabitants, and its spatial functions must be discovered and defined by the people who inhabit it. The "cave" is in fact a terrain that is rich in potential.

What were the beginnings of the sites for human activity and living? Sou Fujimoto has gradually developed an interest in the fundamentality of architecture that transcends physical time. For me, the debate between "nest and cave" is not about favoring one or the other, but rather responds, from a broader perspective, to questions about the different circumstances of relevance and existence confronting modern and contemporary architecture, and maybe this issue of the origins of the human abode is something that all architects – whether Le Corbusier or Fujimoto, or those living in other eras – are attempting to explore.

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Translated by Andrew Maerkle. Parts of this text are revisions of preexisting translations. Unless otherwise noted, all photographs by Hu Fang, courtesy of Vitamin Archive.

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Jorge Otero-Pailos works at the intersection of art, architecture and preservation. He has been exhibited at major museums, festivals, galleries and foundations. Notably, Manifesta7 and the 53rd Venice Art Biennial. In 2009 he was listed as one of ten young Spanish artists to watch in Architectural Digest and featured that same year in the BBC TV's documentary Ugly Beauty alongside Damien Hirst, Anish Kapoor, Carl Andre, and Yoko Ono. He has received awards from major art, architecture and preservation organizations including the Kress Foundation, the Graham Foundation, the Fitch Foundation, and the Canadian Center for Architecture, and in 2012 the UNESCO Eminent Professional Award. He is a member of the Academy of Arts and Sciences of Puerto Rico.

1
Sigurd Curman, "Principles of Restoration: Examples and Desiderata (1906)," *Future Anterior*, no. 2, vol. 7 (2010): 68.

2
ICOMOS, "International Charter for the Conservation and Restoration of Monuments and Sites (The Venice Charter, 1964)" http://www.icomos.org/charters/venice_e.pdf

3
For a good primer on the school of typological urban morphology, see Gianfranco Caniggia and Gian Luigi Maffei, *Composizione architettonica e tipologia edilizia: Vol 1, Lettura dell'edilizia di base., Vol 2, Il progetto nell'edilizia di base* (Venice: Marsilio Editori, 1979).

4
Antonio Almagro, "Arde Sagunto: La Polémica Restauración del Teatro Romano," *Arquitectura Viva* no. 32 (September–October 1993): 67. My translation.

5
Manuel Marín, "El TS echa abajo la rehabilitación del Teatro Romano de Sagunto: Considera que su reconstrucción vulnera la Ley de Patrimonio HIstórico," *Diario ABC*, October 18 2000, 48.

6
"El TSJ considera 'imposible' demoler las obras del Teatro Romano de Sagunto," *El Mundo*, April 27, 2009

7
Beatrice A. Vivio, "Transparent Restorations: How Franco Minissi Has Visually Connected Multiple Scales of Heritage," *Future Anterior*, no. 2, vol. XI (Winter 2014): 1–17.

8
Colin Rowe and Robert Slutzsky, "Transparency: Literal and Phenomenal...," *Perspecta* 8 (1963): 45–54.

9
Margarita Lázaro, "Denuncian la construcción de un merendero sobre un yacimiento arqueológico de más de 6.000 años," *Huffington Post* http://www.huffingtonpost.es/2015/08/24/yacimiento-arqueologico-merendero_n_8031478.html?utm_hp_ref=spain&ncid=tweetlnkushpmg00000067

10
"Mayan pyramid bulldozed by Belize construction crew," *BBC News*, May 14, 2013 http://www.bbc.com/news/world-latin-america-22521669

11
Eyal Weizman, "Introduction: Forensis," in *Forensis: The Architecture of Public Truth* (Berlin: Sternberg Press, 2014), 9–32.

12
Jacques Derrida, *The Truth In Painting*, trans. Geoff Bennington and Ian McLeod (Chicago: University of Chicago Press, 1987).

13
Derrida would have argued that the frame is still conceptually there in a frameless painting. The denial of the physicality of the frame is an acknowledgement and affirmation of its conceptual role in creating a border within which the painting is constituted as the site of meaning, and outside of which there is only insignificance. The frame's invisibility could be read as an unknowing attempt to express its conceptual status as a nonentity.

14
Derrida, *The Truth In Painting*, 45

15
It is worth pausing for a moment to consider how the supplement can be against the work that it is part of. For example, the missing portions of the Erechthion's caryatid column are supplemented with square masonry and a titanium rod. Physically, these supplements are the work. Without both old and new pieces, the column does not stand up. But they are crafted in a deliberately crude and unadorned way. On the aesthetic level the supplement prevents us from immediately appreciating the aesthetic unity of the work – we must imagine it. At the same time, they prevent the ancient fragments from disaggregating completely. That is to say, conceptually the supplement is positioned against allowing the monument to naturally decay into a formless ruin.

Bernard Khoury

Plan B

e-flux journal #66 — #66—october 2015 Bernard Khoury
Plan B

Let's rewind back about twenty years or a bit more. Back in 1991, while completing my studies in the US, I visited a traveling exhibition of what to me were extremely powerful war images of Beirut's city center, which had been a no-man's land for approximately fifteen years. These struck me personally, as I had spent my childhood moving between the two sides of the city, around but never through this battlefield. Many of these buildings were being bulldozed very quickly – by the early '90s a master plan was already being developed by Solidère, the private construction company in charge of reconstructing and rebuilding the city center. At the time this was literally the largest real estate venture on the planet. And as these buildings were disappearing, the question of the impossible collective memory of the city came to my mind as a young student.

Living in an academic cocoon, I produced a project that I often recall when presenting my work today. *Evolving Scars* was an attempt to turn the negative demolition of these buildings into an architectural exercise. At the time, I was working as a student with Lebbeus Woods, and I was fascinated by his work for the way it dealt with war and architecture. *Evolving Scars* began with trying to recognize the fact that there was an incredible attraction – if anything, a dangerous attraction – to the effects of violence and war demolitions, and their aestheticization in architecture and other creative fields. Through this exercise, I realized that there is something very dangerous about over-romanticizing war. I designed an apparatus that would serve to literally physically demolish war-torn buildings located on what used to be the battlefields of Beirut. The demolition apparatus would also serve as a memory collector, an inhabitable capsule in which memory is deposited as quantified data. The more memory you collect, the more matter you demolish. The ashes of the demolished buildings would be collected and stored in a newly constructed transparent glass erected around the periphery of the ruin. The process would end with the complete demolition of the ruin, the physical saturation of the transparent glass membrane erected around the periphery of the ruin. After that, the installation would implode, leaving no physical trace of the edifice above ground. The collected memory would then be accessible through the buried capsule. This was in 1991. When I look back on it, I think the comfort of my academic cocoon in the US was very far from the political reality in Beirut. The reconstruction of the nation as I thought it would happen did not happen. I had to find other territories of intervention. Years later, I was recuperated by the entertainment industry, and as I returned to Beirut in 1993, the first

which apply not only to here but also to elsewhere, not only to the farm, village, or nearby city but also to mountains, rivers, and ancient gardens. Were it to be viewed from the stars, Mirrored Gardens might be only a small point in the complex body system of the Earth, but just like a point in the meridian system of the body, it connects the flows of different kinds of energy. And while the purpose of these energy flows is not necessarily clear, they contain both the aspiration of life and the indifference of death.

If *shānshuǐ* is itself a conceptual model of the universe, the Chinese landscape painting an eternal capturing of momentary fluxes in the energy of the universe, and the Chinese garden an archetypal space of landscape in the earthly realm, then perhaps what is ultimately pursued through the space represented by the garden is not the realization of a material space that simulates mountain and water but rather a space that allows people to be forgotten in the landscape, to spend time together in the world.

Towards a Non-Intentional Space

Reflecting on when we asked Sou Fujimoto to plan the architecture of Mirrored Gardens, I don't think any of us anticipated that it would lead to a three-year design and construction process. But what we all came to realize through the extraordinary collaborative research that developed over that process, as well as through our continuous perception and appreciation of the space and site, is that such a process is perhaps itself part of architectural practice, echoing the "weak architecture" that Fujimoto has consistently explored.[6]

Through the constant testing of human relations between real and imaginary space, Mirrored Gardens has gradually developed into a kind of return: a return to spatial forms that are naturally generated in the repetition of the everyday that confronts humanity. The space of Mirrored Gardens unfolds in the reciprocal illumination and refraction of self and other, gradually surpassing even its own architectural intention.

On a trip to Kyoto in August 2013, I went with Fujimoto to visit a Japanese rock garden. Standing before this historical construct combining both architecture and garden, we sensed a powerful harmony in which everything is completely integrated. Fujimoto commented to me, "I am curious about how the elements of a culture reinforce and overlap with each other, like the tiles of a rooftop … Of course we could try to distinguish between where the architecture stops and the garden begins, but as a whole, it is completely different from our current understanding of architecture." And then, he reflected,

> I feel this kind of environment has layers of depth that go beyond the individual, because there is a cultural background to the daily lives and practices of the people who use it. All the systems and their related technologies are intertwined together in a long history. I am amazed by the beauty of

Study models illustrate the architectural working process (2011–14) of Mirrored Gardens. Photo: Sou Fujimoto Architects.

modernity, but for a long time we have had no means to encounter them, no capacity for listening to the sounds of their presence.

Following the intimations of the life journey, I am now attempting to connect two spatial archetypes that would seem to be far removed from each other in terms of geography and culture – Krameterhof and the Chinese garden – which will in turn allow us to think about the potential of the art space today: as a site for focusing on flows of energy and processes of growth; as a site for focusing on everyday nourishment and cultivation; as a site for practicing care for others and preparing space for the exercising of sensibility; as a site which, instead of being detached from its surroundings, aspires to be perpetually open to multiple dimensions of time and life. If this were so, then regardless of whether it is Krameterhof or the Chinese garden or some other more latent spatial archetype, the significance of which escapes our current understanding, all would develop more fundamental links with the implications of the "art space." The lives of such spaces must be maintained through constant encounters with different forms of life, so that through a kind of daily discipline of receptivity toward relations and dynamics, people and spaces reciprocally exchange each other's modes of living.

Perhaps the twisting paths of the garden are an image of the life journey. Between the growth of the world and the maturation of the human psyche, between cultivated nature and being cultivated to become more natural, we are just beginning to seek out the resonances between exquisite garden and open field.

Forgotten in Shanshui (Mountain and Water)

Grounded in a sense of contemporary existence, this space called Mirrored Gardens attempts to construct a "field" where contemporary art, daily life, and farming-oriented life practices can merge and flow together. As constructed "nature," Mirrored Gardens re-interrogates art's "maintenance" of life through the creative practices that are generated there. It investigates how art can become an active medium that facilitates the transformation of different ideas, material forms, and dimensions of space-time. The spatial form of Mirrored Gardens reflects the processes and results of these fluid ideas and energies as they mutually shape each other.

For Olafur Eliasson, the model and reality are not polar opposites but actually generate similar effects. "Models have become co-producers of reality," he says.[4] If we could consider an artwork or architectural space to be a model of thought, then the space of Mirrored Gardens attempts to be a reciprocal reflection and measurement of topography, air, water, and light, as well as of the people who enter the space. Just like the emphasis in quantum mechanics on the idea that the observer necessarily becomes an organic component of the system, when we put ourselves in a space, we naturally cannot avoid assuming a sense of responsibility toward that space. Again quoting Eliasson: "The user's interaction with other people co-produces space, which in turn is a co-producer of interaction. By focusing on our agency in this critical exchange, it is possible to bring our spatial responsibility to the fore."

More than a physical formation of the landscape, the topography here should be understood as being part of a cultural topology which allows us to imagine the potential for a "homeopathic architecture"[5] (an architecture that conforms to the gravity of the Earth and the human scale of perception).

Spring water, rain water, ground water; drinking, recycling, filtration, purification, irrigation – the aquatic ecosystem here is not oriented toward scenery, and is instead part of an energy cycle. In the same way that delta areas have always nurtured the development of civilizations, the pleasure of being close to water comes precisely from the transparency of the life source: with time, we grow intimate with the resources that nurture human life.

Also, as far as possible, the air here is neither blocked nor filtered by artificial mechanical systems; the question today is whether we can still breathe without such artificial control. As a condition for human existence, air is becoming increasingly conditional: clean air is no longer a public right, as capital controls access to fresh air (see the advertisements for air purifiers, for example). In the near future, people may have to pay for air (just as we have grown accustomed to buying water). The invention of air conditioning transformed the way we breathe in our daily lives, and the philosopher Peter Sloterdijk has traced this change to the use of chemical weapons in World War I – the first time in history that air was used to control and take life. If we say that human existence is in a sense immersed in air, then could the architecture here allow people to truly immerse themselves within its climate?

Or, when we discuss the perception of light here, we are also concerned with the night and its disappearance in urban space – how can we preserve the darkness here?

Numerous models were produced in the process of conceptualizing Mirrored Gardens, including spatial models and conceptual models

Bernard Khoury / DW5 Architects, *Evolving Scars,* 1991.

Bernard Khoury / DW5 Architects, *B018*, Beirut, Lebanon, 1998.

Shadows fall on a cement wall in the Chinese gardens.

The path to the Mirrored Gardens is lined with palms, which continue to exist from a previous time. Photo: Zeng Han, courtesy of Vitamin Archive.

Borrowed scenery decorates the Chinese garden.

building I executed was completed five years later, in 1998. It was a nightclub in the Quarantine (Karantina) district, on the site of a former refugee camp that was burned to the ground in January/February of 1976.

Being asked to build a nightclub on such a site could be a problematic proposition. This is not a memorial nor a monument. B018 does not have a façade, it is buried – it peaks at about seventy centimeters above the tarmac, so it is a completely invisible building that comes to life at night as its roof panels open up to engage with its surroundings. The idea of pushing the building below ground was an attempt to preserve a flagrant void still visible through the contrast of the overdevelopment of the surrounding areas against the empty backdrop of the Quarantine sector, which remains doomed to this day. With an initial land lease of five years, the club is still successful seventeen years later. The energy we injected into this sector is in my opinion far more worthy than what a postwar rhetorical monument could provide.

After completing B018, I came to be labeled as an entertainment architect. A year later, I accepted a commission for another problematic intervention: the Centrale restaurant and bar. The site for this intervention was located at the edge of the former city center, a battlefield during the fifteen-year war, now restored and brought back to its supposed original French mandate and Ottoman architectural flavor. The structure we were given had been declared a historically preserved edifice. It is interesting to notice what was considered historical and worth preserving in the early postwar period. There were obviously the six archeological layers of antiquity beneath the city center, and then beyond this, the remnants of the Ottoman Empire, followed by the French mandate. After that, for some strange reason, history stops when the history of the Republic was supposed to begin, and that is after independence in 1943. Beirut's modern, more recent period never made it into history books and the structures it generated are still not considered historical, possibly because the period is too problematic. Local preservation laws, just like everywhere else, are focused on the preservation of façades. Whatever you do inside does not matter to historians. What is important is the skin, the envelope. As the new program required open spaces of a radically different nature than what originally existed, we had to gut the edifice and erect a new structure inside. Rebuilding a structural membrane on the inner periphery while reinforcing the existing facades with temporary beams. This is a very complex structural exercise.

After consolidating the remains of the original façade, I chose not to re-plaster it. I kept the decaying plaster, protecting it with wire mesh. So you are left with the poetry of decay. We would therefore be allowing the remains of the initial building to disintegrate, containing its ashes within a peripheral wire-mesh envelope. Inside is the main restaurant hall, which has an unusual setup – one single communal table around which the guests are seated. Inside the table is a closed circuit through which the waiters serve the guests. The waiters' only exit out of this circuit is through a staircase positioned in the middle of the setup, bringing them down through a hole and into the kitchen below. We managed to maintain this odd setup for about a year and a half, after which the management could no longer deal with the situation and the initial plan had to be revised.

These projects were conceived as temporary buildings, because they each had a life expectancy dictated by a short-term rental contract. When we designed B018 back in 1997/1998, for instance, it was initially set to expire in November 2003. Your relationship with temporality changes when you know that your project is set to be bulldozed in such a short time. This is a hard fact for an architect, because we are probably the last practitioners still stuck in the Stone Age. We build with matter, with stone, with steel, with very long-lasting materials. So our relationship with temporality is rooted in permanence. On the other hand, working on temporary interventions enables you to take certain positions you would not take in more permanent situations. So temporality became a very central concern in my work, not only in the way I was building and manipulating matter, but also allowing me certain postures and more radical positions that would have otherwise been more difficult.

I was approached for another site in 1999–2000, where the surrounding buildings were still in ruins. The program of our building entailed a sushi restaurant and bar. Yabani is the result of, yet again, the impossibility or the absurdity of placing such a program on such a site. The building next to it at the time was squatted by construction workers living without running water, toilets, handrails, or windows, and probably earning the average wage for a construction worker at the time of less than $150 a month. And we were designing a sushi restaurant where the average bill would be $50. We erected a building that asserts its absurd presence on that particular site and at this particular moment in time.

Years later, I became the face for Johnnie Walker scotch whiskey's "Keep Walking" regional ad campaign in Lebanon, an act that was not well appreciated by my peers. If the institutional

projects never came around, it is because public space as it is understood in the Western world vanished from our territory. Our cities are now in the hands of the private sector. In my part of the world, it becomes necessary to recognize this sour reality and work from there. This does not mean that one cannot produce relevant meaning out of these situations. Working for the entertainment industry can also be a relevant political act. Why should it be less relevant than acting on more conventional institutional territories, such as building memorials, museums, or other public buildings? Public commissions, in my opinion, lead more often to consensual political stances due to their accountability.

In addition to time and temporality, finance and speed are also central in my work. Following the projects for the entertainment sector, I was approached by the banking sector. Banks have extremely sophisticated mechanisms in plotting their presence on their respective territories. One of my first projects for this sector was the prototype for a free-standing bank pavilion in the small Lebanese town of Chtaura, twelve minutes away from the Syrian border. This was pre-2004–05, when all the major political decisions were being taken in Damascus. Along the highway that our project fronted, we would see local politicians on their way to Damascus to take orders, with something much more interesting happening in the other direction. There were cars coming from Damascus – Syrian cars, packed with cash in plastic bags. Back in 2004, the private banking sector was almost nonexistent in Syria. Chtaura, being the first stop on the way from Damascus, was where many Syrians would come to place their money securely in Lebanese private banks. If you drive through Chtaura you mainly see agricultural land, except for one strip almost entirely comprised of banks. I got caught up in this situation and designed a building that turned its back on Damascus, while its front spit money from its mouth through a drive-through ATM machine. This also brings us to the impact of speed on architecture. This is a building meant to be perceived exclusively at the speed at which an automobile travels.

The fifth building I built, the Black Box People Restaurant, is located just a few kilometers north of Beirut. Interestingly, it's a building that no longer fulfills its initial program. The client who commissioned it cared less about what was inside the building and more about its loud visual impact on the highway. Our

Bernard Khoury / DW5 Architects, *Centrale Restaurant*, Beirut, Lebanon, 2001. Photo: Joe Keserwani.

of Laozi's philosophy of "doing nothing," as attained through the planting practice of an Austrian farmer:

> Tao abides in non-action,
> Yet nothing is left undone.

Among the ponds that Holzer has made, some have rocks placed in them, others dead roots, which originally served to build up ecosystems for various organisms (for example, the roots provide sanctuaries for minnows to escape bigger fish), but such constructed environments also generate their own unique beauty. This is exactly in line with the understanding of the "art of farming" (in opposition to industrialized agriculture) advocated by Masanobu Fukuoka, the pioneer of natural agriculture in Japan: farm work does not have the sole objective of providing food for humanity; it is also an aesthetic and spiritual approach to life that leads to the cultivation of humanity.

Gardens Await

The moment I saw Holzer's "water gardens," I sensed the presence of a deep practical aesthetics, even though Holzer himself has no desire to achieve "beauty" through care or deliberation. He believes that anything that has a function in nature is beautiful. Such beauty derives precisely from the interaction of human and nature in the process of time, in which long-term exchanges of energy sculpt a material interface that can be psychically perceived – a certain spatial form that makes us see, hear, and feel fundamental ideas about human existence, and which accordingly binds these ideas together.

Everything that Holzer has done is not simply a return to traditional agriculture, but rather uses his experimentation to open up a new dimension of existential philosophy. His land has an efficiency that transcends the limits of space and time, and my sense of its spatiality also inspires me to discover an inherent connection between Krameterhof and the Chinese garden.

When I was young, I actually lived next to a garden, but at the time had neither the patience nor the comprehension to establish a dialogue with the garden's poetics. In contrast to the Chinese sensibility expressed in the couplet "Fading light filters through forest depths, / To glance upon the moss again,"[1] I was sympathetic to a sensory orientation reflecting a more urban significance: "The apparition of these faces in the crowd; / Petals on a wet, black bough."[2] But in the twists and turns of life's wilderness, experiences of cultural collisions gradually led me to recall, from the recesses of my mind, memories of the space of the garden, and at last I realized that the shelter of the garden had in fact always accompanied me through life's anxious moments.

At the time, I was deeply influenced by some rare footage of gardens that appears in Michelangelo Antonioni's documentary *Chung Kuo, Cina*. Antonioni shot the film in 1972 at an extraordinary moment in Chinese history, and the people in the gardens, wearing their Mao suits and Lenin coats, still kept about them a carefree spirit.[3] What strikes me about the film is that the scene about the gardens of Suzhou appears after a scene on the everyday diet of the city and is followed by a scene about temples. Perhaps this sequencing is a metaphor for the raison d'être of the garden: Is it both an extension of quotidian space, as well as its sublimation?

The Chinese garden invites people to gain liberation from the pressures of life and society through an encounter with a meticulously constructed nature. The garden's implications are manifested not just in its corresponding architectural spatial aesthetics, but all the more so in its capacity to transform the internal space of those who encounter it. Here, the processes of growth in tandem with the world, as well as those of daily maintenance, become essential elements for enriching and sublimating people's inner lives. "My" ideas and perceptions constantly change as "I" stroll through the garden, which dislodges "me" from the conditions of a passive, consumable landscape. True pleasure comes from the synthesis of individual awareness and the artificially constructed natural environment. Amid air and light and shadow and water and rock, "I" escape from the center of "myself," escape from the "center of humanity," and enter another, more expansive dimension of space-time.

As a practice for producing space that approximates nature – as the conversion into reality of a "philosophy of *shānshuǐ*" (mountain and water) – the Chinese garden is not merely scenic. Existing both as cultivated nature, and as nature that cultivates those who regularly enter it, the garden intentionally reflects the ideal state to which humanity could or should attain. The garden is thus individuated even as it admits universal significance; the two are ultimately indivisible, just like mountain and water in the Chinese conception of landscape.

Correspondingly, there is a modest power that applies to both the art of gardens and that of farming, both of which reference natural laws of nourishment, preservation, and anticipation; although they are not revolutionary formulas, they both oppose contempt for life. As I see it, the art of the garden and the art of farming have always been concealed within the progress of

A view of part of the aquatic ecosystem at Krameterhof shows one of Holzer's ponds.

Bernard Khoury / DW5 Architects, *Yabani Restaurant*, Beirut, Lebanon, 2002.

Bernard Khoury / DW5 Architects, *Black Box Restaurant,* Beirut, Lebanon, 2005. Photo: Aishti.

Hu Fang

Towards a Non-Intentional Space

The Path to Krameterhof

Would the space and time of the future ever open up to us again, if humanity no longer provided for and contributed to them?

In July 2012, I traveled to Salzburg, the home of Mozart, to visit a farmer named Sepp Holzer. In 1962, when the then nineteen-year-old Holzer took over his parents' farm in the mountains of Lungau, he could not have imagined that the farm, known as Krameterhof, would become such a visionary land, and that he himself would be viewed as such a polarizing figure, described by some as a "rebel farmer."

The path to Krameterhof.

At the time, monoculture and governmental farming subsidies were gaining prominence in Europe, encouraging landowners to convert the old-growth forest into industrial plantations for producing specific varieties of wood. Foreseeing the damage this practice would inflict on the land and its ecology, Holzer decided to seek out his own approach to agriculture that would respect nature, and use it to preserve his land. He has done just that since taking over his parents' farm, transforming the model for human interaction with land, animals, and plant-life in the process.

Holzer has turned forty-five hectares of mountainous terrain into an enormous forest garden with a water system comprising some seventy ponds and channels, which he carefully designed and manages himself, and which nourish his terrace fields. Yet the manpower overseeing this sprawling place requires just two people, Holzer and his wife, Veronika. Different kinds of vegetables, grains, fruit trees, and animals all exist in symbiosis here, growing naturally and leading their own lives – growing all the more bountifully and robustly beyond the reach of human hands. For the Chinese, what this land represents is perhaps the actualization

1
Tobias Just, “Eine Milliarde neue Wohnungen,” *Frankfurter Allgemeine Zeitung*, October 22, 2010.

2
Klaus Drömer et al., *Housing for Everyone: Affordable Living* (Berlin, 2014), 13.

3
According to the 2005 census, about 35.7 million people live in Tokyo, with a population density of 13,415 people per square kilometer. All data taken from GFK-Bevölkerungsdatenerhebung, Nürnberg 2011.

4
Alexandra N. Katz, “Half a Million Families Living in Poverty,” *Argentina Independent*, October 5, 2011 http://www.argentinaindependent.com/currentaffairs/half- a-million-families-living-in -poverty/

5
See http://estudioa77.com/?portfolio=el-gran-aula

6
See http://marcoslrosa.com/Collective-Retrofit

7
See http://www.angelil.arch.ethz.ch/ as well as the excellent volume *Building Brazil!*, ed. Marc Angélil and Rainer Hehl (Berlin: Ruby Press, 2011).

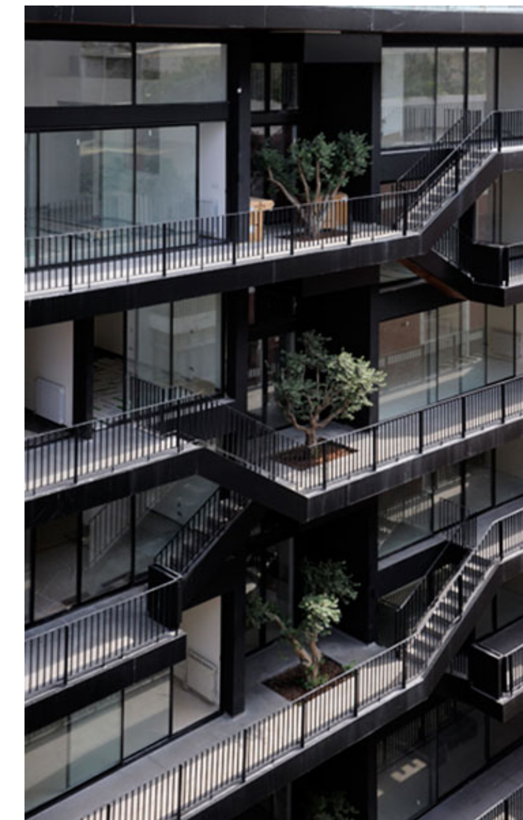
8
See Niklas Maak, “Odyssee im Wohnraum,” *Frankfurter Allgemeine Zeitung*, September 10, 2010.

intervention here consists of building an apparatus that encroaches on the highway. It includes a large frame encasing a vitrine, an oversized LED screen, and a drive-through cash dispenser. One Times Square in New York houses a building that is completely empty except for its ground floor, yet it is certainly one of the most expensive pieces of real estate in the world. Its façades have become much more financially valuable due to their overexposure to the busy intersection of Broadway and Seventh Avenue. These billboards now wrap the façades of the building, sealing it from the exterior and making its initially inhabitable surfaces no longer functional. These situations are interesting to me for representing the end of architecture's traditional purpose. These are also situations where our practice begins to address logics of a different nature.

Most buildings on the highway on which Black Box encroaches already spontaneously respond to this logic, with an overwhelming number becoming a vertical support to oversized advertising billboards. Years later, the same client approached me to design an extension of his department store to be located along that same highway, adjacent to the Black Box plot. This building was to house an art foundation.

With a client rooted in the fashion industry, what seemed interesting at the outset was the relationship or the contradiction between fashion and art. We designed the largest stretch canvas in the world, which was to be 110 meters long and seventeen meters high, and backlit. It served as both a work of art and signage. The generic slabs behind our seven-meter-deep highway installation could be museum space or retail space; it did not matter. This is not a museum you walked to, but a museum you drove to by car, accessible only from the highway. The seven-meter-deep façade is comprised of three frames: one that integrates and manipulates the car; one that holds the artwork or the big commercial banner; and the third, an entertainment venue housing the longest bar in the world. But the client did not adopt our proposal. Instead, he chose to build the scheme proposed by David Adjaye, now nearing completion.

Beyond temporary buildings, I also designed and executed more permanent structures that could survive beyond my time, and this was a big leap. Most of these projects, at least on the local front, were for the residential sector. Building for this sector is a completely different story, because you can fall into very consensual



Bernard Khoury Architects, *Plot #183*, Beirut, Lebanon, 2009. Photo: Geraldine Bruneel.

definitions of habitat that are imposed by developers and the real estate industry. The danger in this is that it can leave less space for specificity.

The IB3 project was devised as an unconventional design exercise that consisted of voluntarily giving up the three major prerogatives of an architect: defining the morphology of the building, plotting its plans, and designing its façades. The envelope of IB3 was a literal translation of the maximum allowable envelope on that specific site. Its shell and its vertical circulation cores were its only structural elements, leaving the plans column-free and open to any desired scheme that would be plotted by its future tenants. Its façades were later designed according to the plans that were developed by others. To make a long story short, I did not design the mass of IB3, but rather blindly applied the setback imposed by the local building code that translates the largest allowable envelope on this site. I did not draw the interior plans of the building, but left that to future tenants' architects. I did not draw the façades of the building, but literally applied the interior elevations drawn by the interior architects onto the exterior skin of the building.

In this case, the architectural exercise is not driven by a defined spatial scheme. It is not about fixed walls, and certainly not about architectural syntax. It is about another way for architecture to deal with concepts and the understanding of the situations that make it possible.

Over the last forty years, developers have been building residential structures that are based on a very bad interpretation of modernist recipes. Deep slabs, poorly ventilated, poorly lit apartments with blind vertical circulation shafts located in the middle of the plan. These models segregate the more public functions from the private parts of the apartments. They seal the dwellings from the outside as if the streets and the surrounding neighborhoods were hostile territory. The kind of social fabric that these models generate can be dangerous. In the premodern era, Mediterranean dwellings had external circulation with open shared terraces exposed to their neighborhoods. They produced other forms of social and urban behavior.

Plot #183 illustrates very literally this desire to reconnect the urban habitat to its urban surroundings. The façade of the building is drawn by a promenade that links all the internal functions, and connects each apartment through an exterior path. This circuit allows you to literally hug your house and travel around it. You are no longer living inside the walls, but in these passages around the apartment that are part of its internal functioning. This, to me, is a political act, an act of resistance to the prevailing models of the real estate sector that produce a bad urban fabric.

Beirut is evolving without a master plan. The only sector built according to a master plan was the Solidère reconstruction of the city center, and this was because a private company was in charge of it. When the bankruptcy of the state translates into the urban landscape, it becomes interesting to examine the city and attempt to understand how its fabric evolved. Historically, most of what surrounded the former historical central district of Beirut was agricultural land. When a farmer passed away, his plot was divided four, six, or eight times, depending on how many children he had. And those plots would become further subdivided, cut deeper and deeper into smaller parcels. This is how a lot of this fabric was generated. The history of these properties can be considered the DNA of the city. It tells you the story of how and why each plot took shape. In more politically stable parts of the world, where institutions administrate public territory and public domain, changes in the fabric do not just happen so spontaneously. In the absence of any master plan, the fabric starts knitting itself in a completely uncontrolled manner.

In such conditions, faced with Plot # 1282, our strategy consisted of foreseeing the potential catastrophic conditions that could arise in the near future due to the rapid development of the area in the absence of any master plan. All surrounding plots being private, the quasi-totality of the periphery of our plot could face blind walls defining the back of the future buildings around us. On this particular site, which has 406 linear meters of periphery with only five and a half meters intersecting public domains, the future does not look bright. Our building was shaped by a continuous setback along its periphery, gradually inwardly offset on each floor. As the plan starts by a literal offset of the plot limit, it results in long, shallow, and elongated floor slabs. With façades open on all peripheral limits, we predict complete permeability, encouraging future developments to turn their faces to us rather than giving us their backs.

Beirut, Cairo, Baghdad, and many other Arab cities had, at some point during the early years of their independence from the colonial powers, attempted to be modern, and gave birth to ambitious forward-looking national projects. Decades later, as the region is in turmoil, the notion of the nation-state has gone bankrupt and has given way to other ideologies and political models. The impact of the present political situation on these territories is difficult to predict. In the meantime, a bit further east, we are witnessing very rapid urban changes with

absorbed the outside world.

Open structures that produce through the concept of infrastructure rather than the concept of architectural, form-oriented building have more than a mere technical, supply-oriented, or network-related interest in understanding the concept of infrastructure. Indeed, they offer a new framework for social infrastructure. What exactly does that mean?

The colony attempted to create a countermodel to conventional apartment living by promoting permeability. It provided the spatial infrastructure for a situational definition of multiple uses precisely because it omitted classical architectural elements such as doors, walls, and thresholds. This is infrastructure without architecture. Private space – the capsule into which one withdraws – was not rigidly separated from the common space. In our era of rampant privatization and increasingly hermetic city spaces such as shopping malls and residential complexes, this model of socially oriented infrastructure could have far-reaching consequences.

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Translated from the German by Beny Wagner

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aren't used for shops but rather as spaces available to the public – as an extension of the city into the building. These can host festivals, exhibitions, and large communal meals. Although the apartments tend to be small – around fifty square meters – residents have access to 150 square meters of communal space, including a rooftop terrace, laundry facilities, and a living room the size of a restaurant. The key to keeping the units affordable is the externalization of many functions that do not necessarily have to happen in the private realm.

In the foundations and settlers model, residents build their own home within a concrete infrastructure provided by the architects Anne-Julchen Bernhardt and Jörg Leeser. Photo: Götz Wrage

Crucial to all cooperative building projects of this type is the elimination of profit. The German building cooperative is very different from building associations whose members rent or sell their apartments when they are completed. The cooperative as a legal form wants to make affordable living space available to its members, who are co-owners and owner-users, and who pay a user fee to the cooperative; speculation on the residential property is legally forbidden. Ideally, a stable group of residents lives together over a longer period of time.

Another example of an infrastructural framework rather than an architectural one is the "foundations and settlers" residential model established by the architects Anne-Julchen Bernhardt and Jörg Leeser for the International Building Exhibition in Hamburg. Here, a concrete block and infrastructure in the style of Le Corbusier's Maison Dom-Ino is delivered to a site and residents build their own houses inside. This approach is similar to Peter Stürzebecher's revolutionary self-established building association in Berlin, where residents experimented with cooperative forms of self-government in a building on Admiralstraße 116 in the Kreuzberg neighborhood.

The Colony: house without form – a model for a new community site

As part of the exhibition "Expo 1: New York" at MoMA PS1 in New York in the summer of 2013, artists, writers, musicians, architects, and students offered week-long seminars and workshops on urgent environmental and social concerns. During preparations for the exhibition, the idea was proposed to erect a temporary building in the courtyard of PS1 where participating artists could work and live. It would be a model for a new form of coexistence and collective work, as well as a site where "exhibiting" could be redefined.

The initial plan was to erect a simple wooden structure, a kind of scaffolding with three floors. Small, simple livings quarters would be built on the two upper floors. A dense belt of plants would serve as a community garden, and would also provide a measure of privacy for the residents. Instead of posting "private" signs to prevent the museum-going public from climbing up to the living quarter, the thicket of plants would create a jungle-like maze of communal space. The threshold would be a labyrinth that provided a sense of privacy without being completely walled off from the outside world.

In conventional apartment buildings, private space is maximized at the expense of communal space. In the colony at PS1, however, private living space was to be kept small – just enough to accommodate a bed, a small table, a kitchenette, a shower, and a toilet – so that ample communal space was available. The areas between the living quarters could be used by the residents any way they wished – to hang hammocks, plant vegetables, set up chairs, and so forth. The ground floor would house a collective kitchen with a long table open to guests. Readings, film screenings, and workshops would be held here.

The construction contract for the colony was given to A77. They erected the scaffolding, but the living quarters were replaced by camping trailers and tents. Communal showers and restrooms had to be built for budgetary reasons. However, the open space on the ground floor worked. Guests came almost every day for lectures and performances. Visitors mingled with the residents and everyone was allowed to watch and participate in discussions. The colony was a laboratory for a new architecture of hospitality, a pilot project that questioned how much privacy people really need and what spaces are conducive to building community. It was built with that which comes before and after construction; it wasn't separated from its environment by walls, and it didn't open itself through doors. It worked more like a sponge that

ambitions of a completely different nature. No longer driven by a national political authority, most of these projects are generated by the private sector.

It is unfortunate to see that the major urban developments in the Arabian Gulf states were not able to produce relevant meaning. The blind imports mainly based on Anglo-Saxon models have so far produced bland urban environments, and the social and political impact on their contexts have been less than interesting. I want to believe that the sour realities of our environments can produce another kind of modernity, one that comes from within.

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This essay originated as a lecture given on October 15, 2014 at the Home Workspace Program 2014-15 workshop "Setups / Situations / Institutions" at Ashkal Alwan in Beirut. All images copyright DW5 Bernard Khoury.

Bernard Khoury studied architecture at the Rhode Island school of Design. He received a Masters in Architectural studies from Harvard University. In 2001, he was awarded by the municipality of Rome the honorable mention of the Borromini prize given to architects under forty years of age. In 2004, he was awarded the Architecture + Award. He is the co-founder of the Arab Center for Architecture. He was a visiting professor at the École Polytechnique Fédérale de Lausanne; École Spéciale d'Architecture in Paris; and the American University of Beirut. He has lectured and exhibited his work in prestigious academic institutions in Europe and the US including a solo show of his work given by the International Forum.

Niklas Maak

The Dispersal of Architecture

The world's population is to increase by between 1.5 and 2.5 billion by 2050. In the coming two decades "more than seven hundred million households will be added," according to Tobias Just, professor of real estate management at the University of Regensburg. "But because urbanization is advancing rapidly," adds Just, "especially in Africa and Asia, and the relocation of a household from the countryside to the city creates an additional need for housing, about a billion more dwellings need to be completed by 2030 to meet demand."[1]

It is clear from the numbers alone that the form of future residential buildings can no longer be addressed by means of conventional architecture. The question then becomes: What form will these dwellings take?

El gran Aula, a project by studio A77, brings workshops, exhibitions, and cultural resources to Parue Patricios through the use of mobile structures, made from recycled elements.

Most occupants of these new structures will not have the money to finance a house as we generally know it, or even an apartment in a high-rise. According to UN Habitat, 400 million city dwellers already live in critically overcrowded accommodations, especially in South Asia and India, where over a third of the urban population lives in spaces occupied by more than three people. In New York, as of this writing, twenty-two thousand children live on the street – the highest number since the Great Depression of the 1930s. Seventy-two percent of the population of sub-Saharan Africa lives in slums; in Southeast Asia the number is 59 percent.[2] Both economically and ecologically, it will be impossible to meet housing demand with the traditional methods and forms of architecture and urbanism.

The problem is exacerbated by the adoption of Western forms of urban sprawl in Asia. Traffic jams in major Chinese cities have taken on apocalyptic dimensions, even though population density in large cities in China and India is still

and error, developing systems in which small housing spheres could be aligned and could traverse large areas. It was building without design method or architecture, more *Tekton* than *Archein* – a more playful and purposeless *Hodos*, or "way." The construction was built around a central spherical hall through which a stream trickled over real rocks, and in which a jungle of cacti and palm trees grew. This space was surrounded by countless intimate spherical rooms lit by the sun. Depending on a user's needs, the entire complex could continue growing. Lovag was given the contract to build this four-hundred-meter-long utopian sphere in 1967 by a man named Antoine Gaudet, a powerful figure in the Parisian stock market. Lovag was already in his late forties and had led a life rich enough to serve as the basis of a great adventure novel.

Born in 1920 to a Jewish engineer who built movie theaters, Lovag grew up in Turkey, Hungary, and Scandinavia. What happened next in his life is hotly debated by the few connoisseurs of his work; Lovag, who was not only a great inventor of forms, but also of stories, always gave different accounts to different people. It's said that he was a bomber pilot in the Russian air force during World War II. It's also said that he sailed from Stockholm to France, where he studied art, worked for Jean Prouvé, and invented a spherical house, which so impressed Gaudet that he contracted Lovag to build a massive one on a rocky slope near Nice. Here, Lovag first tested his spherical construction technology on a small structure that initially stayed vacant, but Lovag eventually

moved into this sphere and used what he had learned to design an enormous house next door.

At some point Gaudet lost interest in the project. Lovag, to whom he had given the lifetime right to live on the property, stopped getting commissions and the biosphere started to decay – the front was still a construction site even as the back had already turned to ruins. Lovag lived in his sphere for thirty years without commissions and died in 2014, the only architect who had lived on his own construction site and in the model of his own building.

Self-Empowerment and a Change in the Architect's Role

Today, the biggest innovations are in residential architecture, and they come from cooperative building groups. This acts as a form of self-help: builders team up and build what they can't find on the market – architecture in which one can live on one's own terms through larger partnerships. This deviates significantly from the stacking of often high-margin, medium-sized apartments in functional buildings. Architects aren't waiting for customers to finally come and give them a job, like depressed private detectives – they commission themselves, design housing, and then look for people who want to live in the same way.

The architects themselves often live in these constructions – as with the architect Silvia Carpaneto, who designed parts of an inner-city lot called Spreefeld along Berlin's Spree river.Here there are traditional small apartments, but also many common areas and "option spaces" on the ground floor, which deliberately

A77's communal living space at MOMA PS1's 2013 summer exhibition "Expo 1-Ecology" promoted permeability between the public and residents through forgoing a harsh separation.

was composed of modules and embodied the idea of an “open school.”[5] Each module was used to teach something: photography, design, music, cooking. In the case of *El gran Aula*, the building isn’t a formally defined sculpture, but rather an open framework for various forms of action, occupation, and implantation.

In 2007 the young Ecuadorian architects Pascual Gangotena and David Barragán founded their office Al Borde, geared towards passing on architectural know-how to the poor who can’t afford architects, thereby contributing to a no-budget culture of building. Their projects pursue infrastructural innovation and operate on open-platform principles that encourage the free dissemination of complex structural knowledge.

In the 1970s, a multilevel concrete block was erected in São Paulo, but never completed. The concrete skeleton stood empty until the 1980s, when homeless families occupied the building, setting up self-constructed sanitary systems and open power lines. Despite this precarious housing situation, the building was popular, as there were plenty of job opportunities, schools, and other social institutions nearby. Beginning in 2002, students in the architecture department at the University of São Paulo, together with the seventy-three families that lived in the building, cleaned up the site, installed a communal power grid, and painted the façade; the words “Edificio Uniao” (Union Building) were painted on the facade to give the building a personality.[6] Gates were installed at the entrances to the small alley in front of the building, turning it into an elongated courtyard were children could play safely. Further measures included rebuilding the flat roof into a shared roof terrace and turning the dreary entrance into a dignified foyer where people could sit together with visitors – a kind of public living room for the building.

While a few interventions have changed the site’s character for the better, in certain respects the social housing mistakes of the 1970s are being repeated: growing structures are demolished and replaced by visions from the drawing board. The result is a diminished quality of life – in the open spaces that serve both as playgrounds and as meeting spaces, and in the narrow streets where people meet. Everything that was afforded by the fragmentation of the favela is being abolished. The residents are being robbed of the last form of capital they have: their proximity to one another.

Staying On-Site: A New Role for the Architect

It is possible for planners to reimagine the chaotic, informal city in better terms. A model for this was developed at ETH Zurich under Marc Angélil. In one seminar, students proposed plans to expand a favela by creating empty concrete frames with built-in water and power supplies, which could be occupied by the inhabitants in agreement with the city, and which could be expanded according to the inhabitants’ needs.[7] This was essentially a radicalized version of Alejandro Aravena’s Quinta Monroy housing project in Iquique, Chile, where the inhabitants are able to expand their own buildings.

In Christian Esteban’s far-reaching conceptual designs, living spaces facing the street can become shops, communal kitchens, or start-up offices. His constructions can accommodate the stacking of additional layers when housing is needed. This kind of open urbanism only works if other conditions are established. For example, small business owners need to receive microcredit for their start-ups so the land won’t fall victim to real estate speculation. This kind of state governance has nothing to do with the welfare state paternalism some liberals complain about. It is rather a sensible investment, not only economically, but also ethically and socially. Transforming favelas into thriving microeconomies can help avoid the enormous social costs that accompany urban decay and widespread impoverishment.

Underlying both of these approaches is an entirely different conception of living. An open framework is established which gets filled in over the years – rebuilt, redefined, and transformed without any control on the part of the architects. This concept was originally pioneered by Bernard Rudofsky in his legendary 1964 book *Architecture Without Architects*, and by Giancarlo de Carlo in his 1970 essay “Architecture’s Public.” Residents were once the inmates of concepts devised elsewhere, but here, by contrast, residents are stakeholders, remodelers, and active co-creators of neighborhoods and cities. This redefinition also applies to the architect’s role. The architect becomes the initiator of social processes, but not necessarily on the side of power and capital; then the architect repeatedly returns to the setting of his or her construction to adjust it to its surrounding metamorphoses.

The Hungarian-French architect Antti Lovag, who passed away in 2015 at the age of 94, was a radical utopian pioneer of this definition of the architect: someone who lives on site as a figure intertwined with the life of his buildings. He built an experimental commune in Tourrettes-sur-Loup near Nice and Cannes and, from 1968, lived there with up to fifty people, who together worked on a 1600-square-meter biosphere until 1982.[8] No architectural plans were drawn up for the biosphere. Instead, the commune’s small team worked according to the principles of trial

In "Collective Retrofit. Edificio Uniao," the addition of a collective power grid and security grates converted a squatted high-rise into a residential structure. Photo: Kristine Stiphany.

relatively low. According to statistics compiled by the German Federal Agency for Civic Education, only 3 percent of the urban population of China lives in Shanghai, whereas 42 percent of the Japanese urban population lives in the metropolitan area of Tokyo.[3] It is not difficult to imagine what will happen if Chinese metropolises catch up with Japan in terms of traffic and population density. If only because of dwindling resources, the European and American model of domestic architecture and "social housing" has come to an end. The issue then is how to provide residents, within the smallest area and for as little money as possible, space for privacy, shelter, and the exchange of information, as well as communal spaces that transcend familiar building typologies – and how to convert and repopulate buildings (estates, factories, administration buildings) that have been abandoned in huge numbers in thinned-out peripheries and areas beset by population loss.

The Case of Argentina

According to UN Habitat, in the next two decades over 30 percent of all urban residents will likely to live in slums. A society that still stands by the idea of living in dignified and safe conditions must begin here, in the political and architectural dimension; working conditions must be defined according to an income that supports a dignified life. According to statistics from the NGO A Roof for My Country (UTPMP), half a million people around Buenos Aires live in slums, of which more than half were built on public land – half of them under or next to motorways or near landfills.[4] About 80 percent have no sewage treatment or gas supply. There are primary schools but no secondary schools in these neighborhoods, which contributes to the low standard of education; social advancement is virtually impossible, or possible only through illegal means.

In Brazil, favelas have by now become barely distinguishable from growing neighborhoods. Heliópolis, in southeast São Paulo, was originally a favela in the 1970s. Today, over one hundred thousand people live there; the muddy slopes have been paved and are now official streets. The favela Rio das Pedras in eastern Rio de Janeiro has developed into a city center. Even in the slums, gentrification occurs: houses are built, shops spring up, and the poorest of the poor are pushed to the edges of the slums, where they live in makeshift shelters. The subdivisions of settlements that develop on the edges and in the middle of metropolises, as a result of either illegal slum building or official urban planning, no longer work; Villa 24 in Buenos Aires, for example, is a slum whose streets don't show up on any map, but whose infrastructure is organized better than many official social housing projects, such as the Barrio Soldati neighborhood, completed in 1978.

In the 1940s, railway workers and migrant workers from South American countries initially settled in Villa 24. Under a "Plan de Erradicación de Villas de Emergencia," the right-wing government attempted to force the inhabitants to either enter regulated social housing away from the city, or leave the country all together. The plan failed; today, some forty-five thousand people live in the Villas 21 to 24. At the same time, since 2001 the population of the slum district Villa 31, near the upscale residential neighborhood of Retiro, has more than doubled.

There were attempts to evacuate this neighborhood under the military dictatorship. In 1974, Carlos Mugica, a local priest and social worker, was assassinated by right-wing anti-communist paramilitaries. Still, with rental costs increasing across the city, the neighborhood grew rapidly beginning in the mid-1980s. Since the 2007 inauguration of conservative mayor Mauricio Macri, the city government of Buenos Aires has tried to force the relocation of the entire slum to the outskirts of Buenos Aires. The national government, however, established a plan to convert the informal settlement into a legal district.

Improving living standards in such neighborhoods is mainly a matter of infrastructure: sewage systems and schools can be built and landfills can be relocated. Policy that deals with what is casually referred to among architects as "slum upgrading" (as if slum dwellers were airline passengers who can get upgraded from "homeless" to "living in a tin shack with no toilet") cannot confine itself to donating a fountain here and a bit of asphalt there; it must develop plans that go further than slight improvements to the existing self-constructed infrastructure. Architects must commit not just to creating sculptural building objects within this system, but to constructing social statuaries.

A77: A Revision of the Image of the Architect in Argentina

What could a building that goes beyond superficial "slum upgrading" look like? The Argentinian architects Gustavo Dieguez and Lucas Gilardi, who operate the architecture firm A77, define their role as architects differently. They often attend to their building – mostly through infrastructural interventions – over long periods of time. They always return to the building process to discuss improvements with the dwellers before rebuilding or adding to the structures. On the Plaza Parque Patricios they built their wooden structure *El gran Aula*, which

Hungarian-French architect Antti Lovag built the experimental utopian commune where he lived among fifty coworkers until his death this past year. Photo courtesy of Johanna Diehl and Galerie Wilma Tolksdorf.