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Urbanism after Innocence: Four Projects: The Reinvention of Geometry

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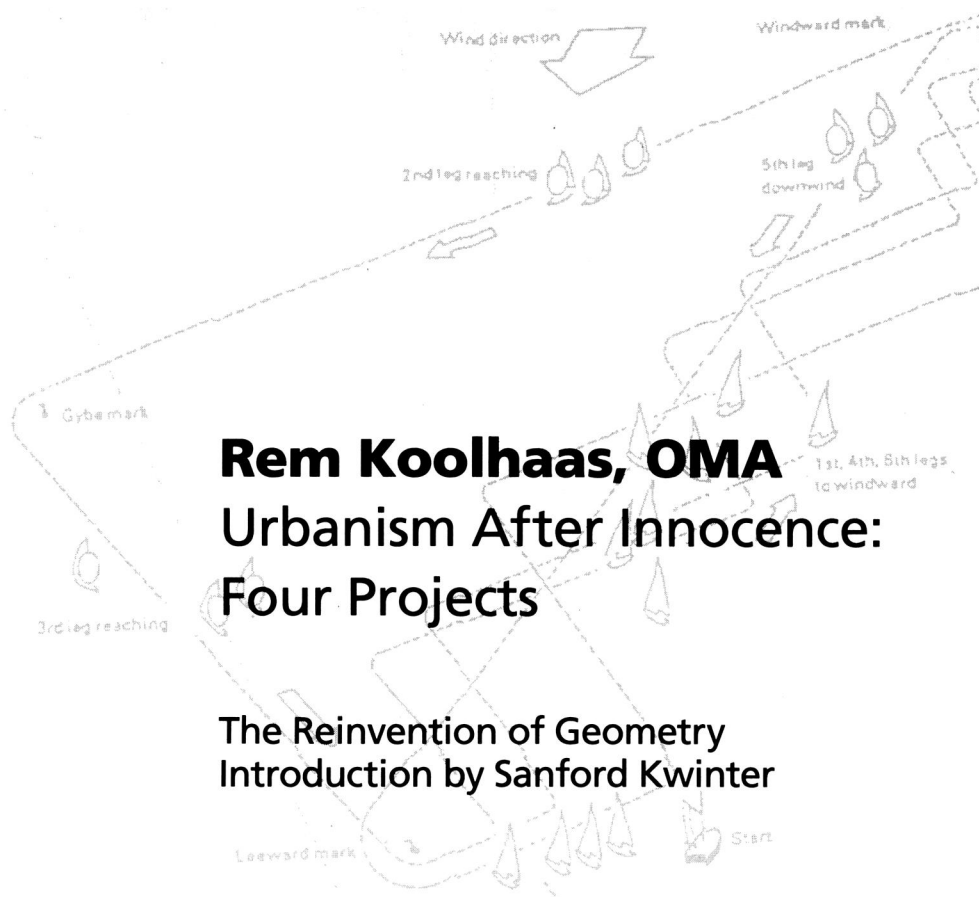
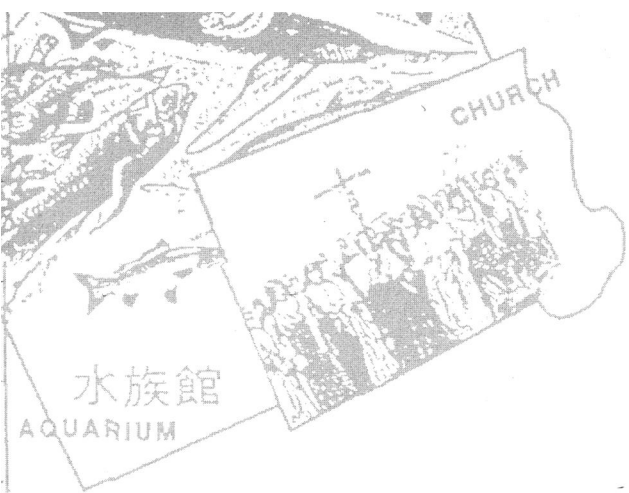
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# Rem Koolhaas, OMA

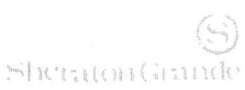
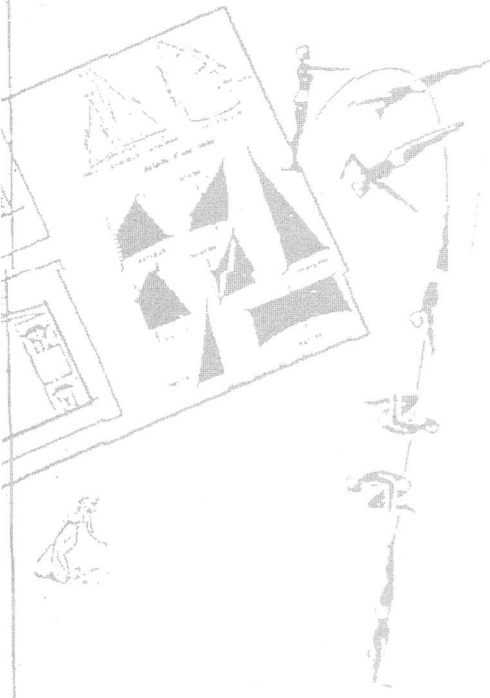
## Urbanism After Innocence: Four Projects

### The Reinvention of Geometry Introduction by Sanford Kwinter

Rem Koolhaas is an architect based in Amsterdam.

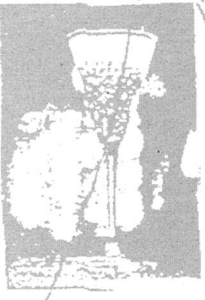
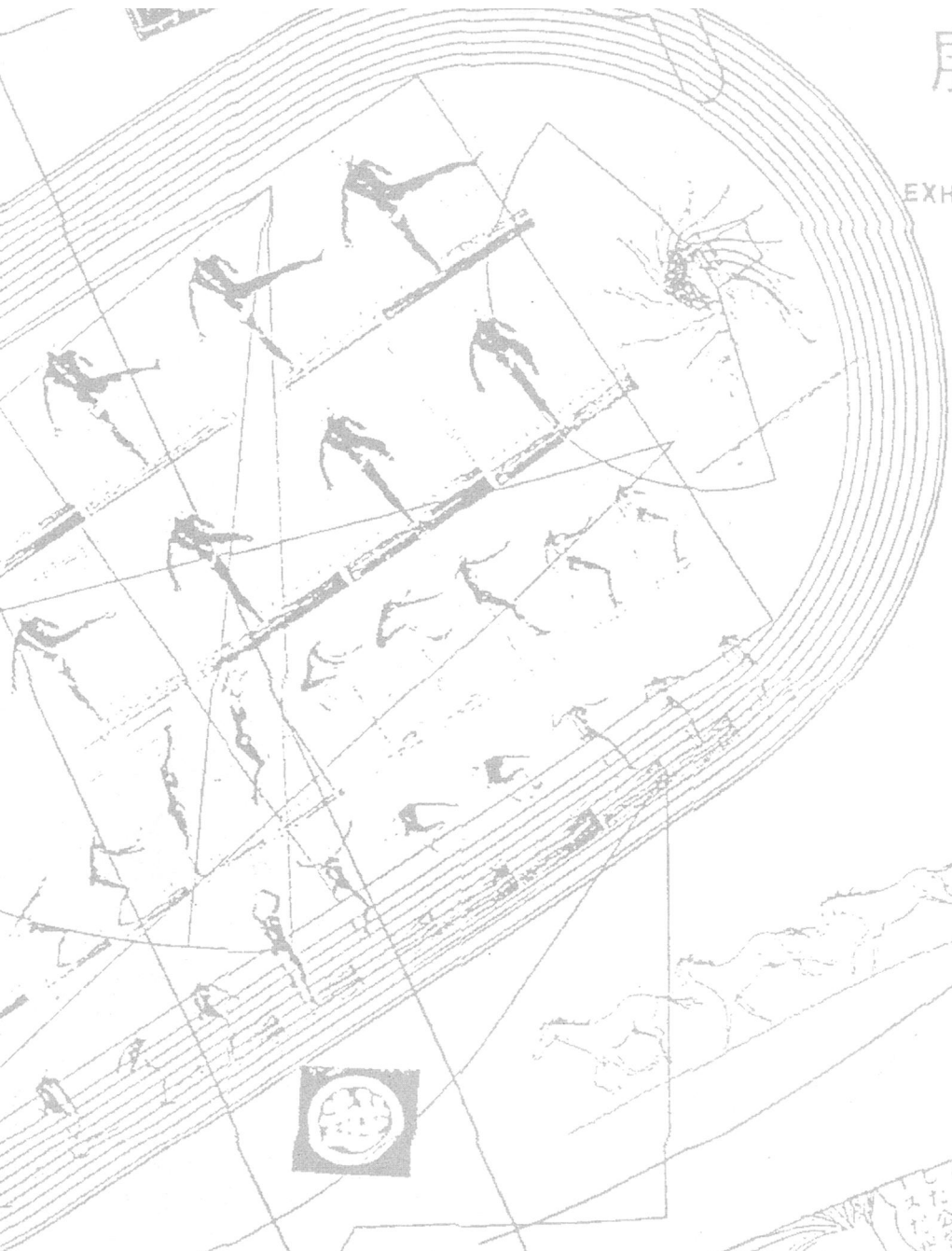
Classical Greek geometry — the study of straight lines, regular solids, and restricted curves — was in essence a timeless geometry: every real shape was seen simply as the reflection or extrusion of an ideal, unchanging, and eternal form. The qualities of a circle or square were constant, based on relations between *magnitudes*; *changes*, that is, transformations and emergences, were not considered real things at all, but imperfections, degradations, perversions of a noble, even divine and pre-given mathematical rectitude.

These basic premises remained almost unchallenged until the nineteenth century, when deep transformations in the theory of time started to give way. Such transformations manifested themselves not only in the new sciences of evolution and thermodynamics but also throughout the urban literature of the latter half of the century, in Flaubert, Dickens, Engels, Baudelaire. Massive and *intensely accelerated* industrial, economic, and technological innovations had begun to transform our experience of the material and historical world: the once imperceptibly slow and stable rhythms of history that earlier furnished a kind of immobile ground for the more labile and fluid human figure began to oscillate and vary in patterns of shorter and shorter duration, effecting an epochal reversal in social and historical experience. What once appeared as a fixed and global continuum subtending human temporal experience — the historico-material assemblage, for example, known as “the city” — began to multiply, mutate, and atomize so quickly and finely that it itself could no longer be conceived as anything other than a turbulent, punctuated fluid.



# 展示会場

EXHIBITION

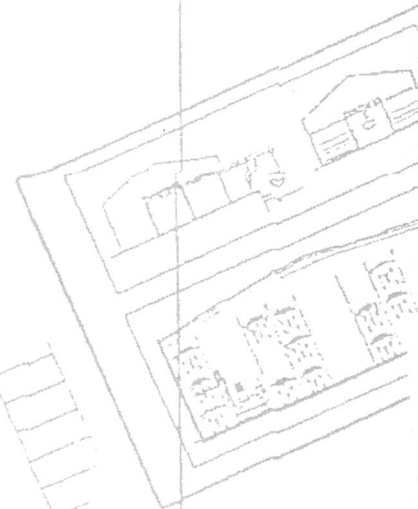


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This new world seemed to force upon us an entirely new — or at least different — type of geometry, one whose roots may be traced with precision through Riemann, Lobachevsky, Bolyai, and Poincaré. In certain ways it may be said that in these mathematicians there may be found a deep and precocious disquietude that surreptitiously informed so much of our own modernity: that the model of discrete, inelastic, and quantitative reason was already precariously foundering even as its most prestigious and rigorous monuments — industrial capitalism, technoscientific rationalism, urbanization — were being assembled. These were the geometries that first broke with the conveniences and classical pieties of homogeneous, linear, or isotropic space; these were the protogeometries of a new, still-premature form of reason, one predicated on acausality, deformability, creative diversification, and active variability. Though it took nearly another century to reach a threshold, the crisis of geometry and reason finally arrived. Today, for the first time, a number of thinkers at the forefront of speculative philosophical, material, and cultural practice have begun systematically to extend their intuition of form to new levels, indeed, to free their intuition from three-dimensional experience, and in a bold, strange act of historical recovery, to deroute the Greeks by returning to the still-untapped power of the pre-Socratic world: in a phrase, *to recognize that processes and events have shapes of their own*.

Nowhere in the architectural world today is this embrace of asymmetry, nonlinearity, and the miracle and undeniability of indeterminate and spontaneously emerging material qualities — all manifested in deep, multidimensional geometric form — so rigorously taking place as in the work of Rem Koolhaas and the Office of Metropolitan Architecture (OMA).<sup>1</sup> All of Koolhaas's recent work is *evolved* — rather than designed — within the hypermodern “event-space” of complex, sensitive, dynamical indeterminacy and change.<sup>2</sup> It would be easy, far too easy, to support such an argument purely through a descriptive analysis of the morphological data that pertain to the stunning figures and exotic massing so clearly evident in every one of his recent *building* projects: the Bibliothèque de France, the Palais de Congrès d'Agadir, the Zeebrugge Maritime Terminal, the Karlsruhe Zentrum für Kunst und Medientechnologie. But the novel, radical figures of single buildings or building systems, however advanced these may be, and however powerful the

fascination they may exercise over intellectuals, planners, and architects, simply cannot do justice to the larger, if inchoate, project of OMA, its attempt to engage the contemporary forces that both carve up and produce our modern world. Indeed, OMA seems virtually alone within today's avant-garde architectural milieu (with the possible exception of Daniel Libeskind) in venturing into the space so shamefully abdicated by architects since the progressivist heyday of the 1960s: *the space of the sociotechnical formation of collective subjectivity*; in other words, the politics of metropolitan “delirium.”

Koolhaas and OMA's trajectory has always been deeply linked to the larger processes that determine social formations — economics and historical trends, aesthetic idiosyncrasy as material fact rather than moral quandary, urbanism as a collection of continually diversifying *practices*. Yet, especially lately, this has not been at the expense of what could well be even more critical; that is, the minutiae of the public sphere — the chaotic fluctuations of markets, governments, and libidinal economies, the velleities of opinion, fashion, and taste.

To the question, What types of structure and form are possible today to sustain a maximum sensitivity to material fluctuations simultaneously *at all scales*, to sustain continual dynamic development over time within an “envelope” (one of Koolhaas's favorite words, roughly equivalent to what Althusser used to call a *conjoncture*) that is fast becoming ludicrously narrow? OMA has ventured some of the most daring — and perhaps exhilaratingly dangerous — practical speculations to be found anywhere in late-twentieth-century culture. But most important of all, it has done this in a way that is consonant with the most compelling and fruitful intellectual developments of our age: *the reinvention of geometry and the geometri-zation of the event*.

Thus it is only in the full-scale urban projects (of which four are here presented in schematic form) that such a claim may properly be put to test. Yet what coherent worldview do they represent and what characteristics do they share? The first, perhaps most general, principle to note is that in OMA's proposals the *argument* always takes precedent over the *project*. In other words, there is always primarily an *engine*, be it discursive or diagrammatic, never a *design* that is introduced into the urban milieu to be reconfigured. It is never a question of orga-

nizing a space at the outset, but rather of unleashing, triggering, or capturing larger and already existing processes.<sup>3</sup>

Second is the adamant refusal to repress either the material fact, the economic reality, or the technological brutality of rampant infrastructural systems, those vitalistic circulatory systems of all modern civilizations, capitalist or otherwise. These infrastructural systems — highways, railways, escalators, roads, ramps, elevators, stairs, mechanical and ventilation systems — are generally approached as capillaries, engravings, or developmental pathways or canalizations to be inflected, redirected, or simply followed like the surf and *mise-en-délire*.

Third, elements are gathered, classified, and distributed never as preformed spaces, objects, or functions but as statistical intensities, pure potentials or virtualities, morphic resonances as variable densities of space-time, activity, or action. The idea is literally *to program*, like a dramaturge or film director, all the pathways and accumulations of information, recalling Cagney's virtuoso microgestures or Minelli's saturated cinematic fields. In these first three general axioms there may be discerned a very clear orientation toward evolutionary, time-based processes, dynamical geometric *structurations*, not structures per se, but forms that follow and fill the wake of concrete yet unpredeterminable *events*.

The fourth axiom has to do with a completely unneurotic belief in the possible freedoms that still lie unconflicted within the type of systems that common wisdom continues to refer to as the "artificial." Though the ethico-political ground here may seem shaky, many of OMA's most tenable and persuasive convictions on the subject are not. This is because instead of designing artificial environments, it deploys richly imbricated systems of *interacting* elements that set in motion rather *artificial ecologies* that, in turn, take on a genuine self-organizing life of their own. The common mistake is to miss the organicism and autopoiesis of OMA's approach and to attack simplistically both the mechanistic substratum out of which its fluid, metabolic systems are made, as well as the unarguably unjust, even nefarious economic and social processes off of which they shamelessly feed. This is true, of course, of all life-forms in all states of nature (nature sustains its forms only through the ongoing violence of capture and

ingestion) and is a contradiction — or an ill-stated problem — that no philosophy or ideology has, or ever will, overcome.

The remaining axioms and principles follow from this latter one.<sup>4</sup> All of OMA's recent urbanist work is about the setting into motion of dynamic self-regulating and self-driving informational ecologies: The idea that non-organic systems such as urban economies, or complex public-work structures, or even small electronic networks like those used in businesses or cultural institutions might have a life of their own (indeed, even the detailed mechanics of the simplest single-cell life-forms) still in our day escapes explanation, as if it were nothing less than a form of magic. Yet in the words of René Thom — and these words might just as well be the battle cry for the architectural methodologies by which OMA almost single-handedly is ushering us into the 1990s and into the century beyond — "Is not all magic, to the extent that it is successful, geometry?"<sup>5</sup>

#### Notes

1. Intimations of these developments, in less systematic form, have certainly appeared in some recent work of Peter Eisenman, Bernard Tschumi, Liz Diller and Ricardo Scofidio, and Hani Rashid and Lise Anne Couture.
2. Koolhaas, with reason I believe, has consistently and categorically rejected the pseudo-concept of a "post-" modernism.
3. "[Manhattan's] architecture relates to the Großstadt like a surfer

to the waves" (Rem Koolhaas in *ZONE 1/2*, *The Contemporary City*, ed. Michel Feher and Sanford Kwinter [New York: Zone Books, 1986], 448).

4. The present article is a prolegomenon to a more sustained and detailed analysis of OMA's work to appear in the pages of this journal.

5. René Thom, *Structural Stability and Morphogenesis* (Redwood City: Addison-Wesley, 1972).



## Melun-Sénart, 1987

The site of Melun-Sénart — the last Parisian *ville nouvelle* — is too beautiful for us to imagine the construction of a new city there with innocence, optimism, or impunity. The spaciousness of the landscape, the beauty of the forests, and the serenity of the farms form an overwhelming presence potentially at odds with any process of development.

It requires a second innocence to believe, at the end of the twentieth century, that urban development — the built domain — can be predicted and controlled with reason. We have seen too many architects of “vision” fail, to dream of a contemporary addition to this chimerical army.

If the built, *le plein*, is now uncontrollable, subject to political, financial, and cultural forces in a perpetual state of flux, the same is not true of the void, where architectural certitudes are still convincing. Thus this scheme is as much a discourse on what should not happen at Melun-Sénart as on what should.

The essence of this project is a system of voids — in bands — that mark the site like an intricate cipher, an urban ideogram. These voids must be protected and maintained throughout Melun-Sénart’s future development.

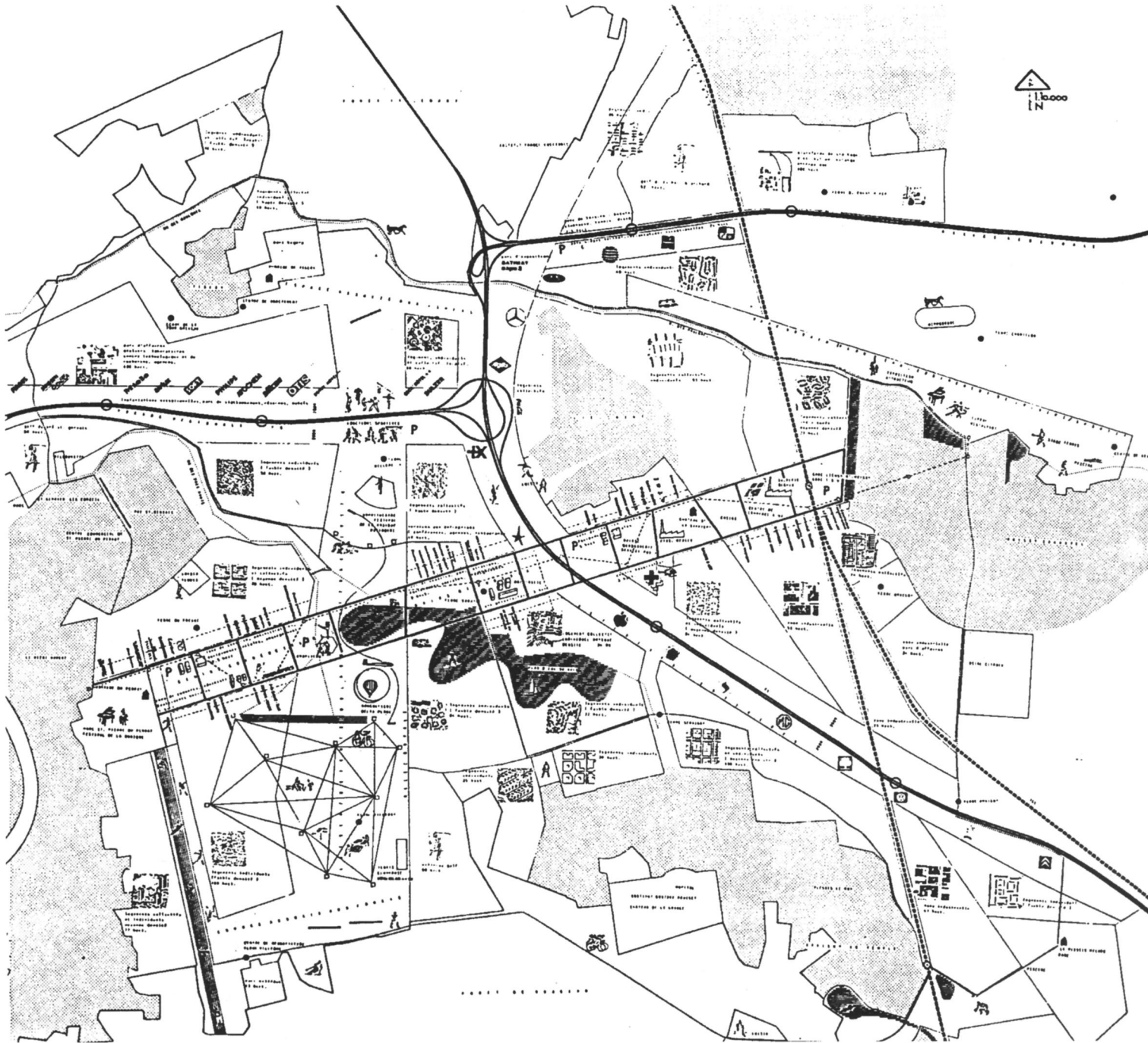
In some cases, the voids preserve the original landscape, circumscribed to gather up a maximum beauty and the most remnants of history. Other voids are created on both sides of the highways and traffic arteries, forming controlled, partially built areas. Some zones have a programmatic justification; they rationally distribute the most essential urban-collective components — universities, centers of government and multinational corporations, hotels, cultural buildings, sports and leisure facilities. These programmatic voids organize the major components of the *ville nouvelle* and will give what is inevitable a quality of the willed.

It is our thesis that if the demarcation of this complex of voids and bands succeeds, insuring qualities of beauty, serenity, history, access, and services, the city of Melun-Sénart also succeeds, whatever its architecture.

The voids define an archipelago of residual islands of varying size, shape, location, and perimeter: the interbands. Each island’s form is generated by the surrounding voids.

Each of these islands can be developed almost independently of the others, in keeping with the specific demands of its site and program. The archipelago system insures that the islands’ individual freedoms as determined by the voids ultimately reinforce the coherence of the whole.

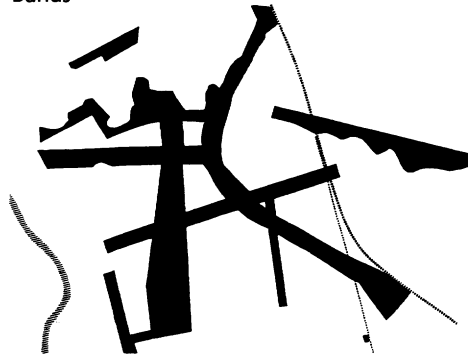
Plan diagram: structure of events



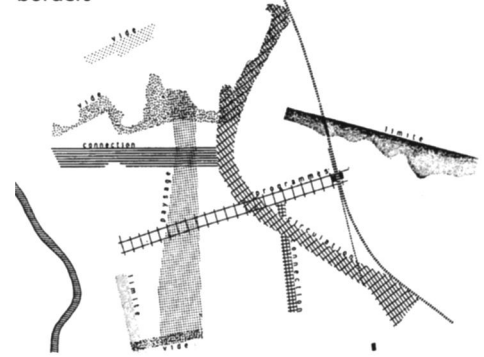


Urban ideogram on the site

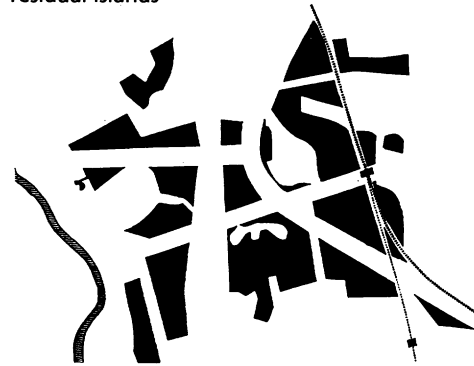
Bands



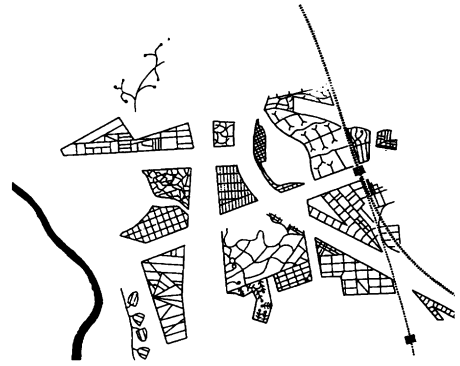
Bands and their designations:  
connections, circulations,  
programs, landscape, empty,  
borders



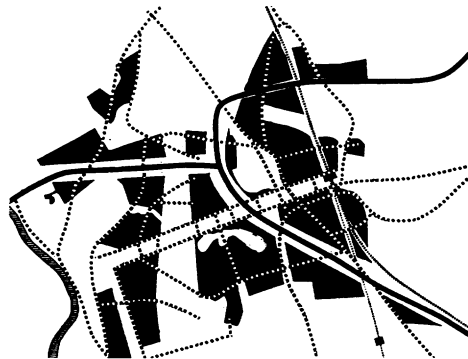
Interbands: archipelago of  
residual islands



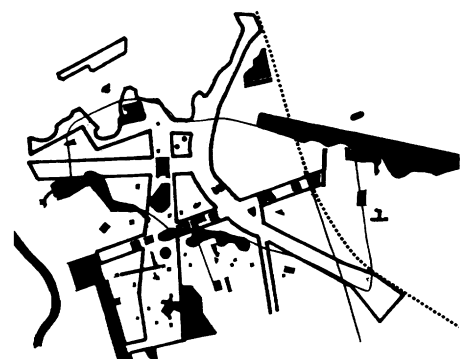
Circulation in the interbands



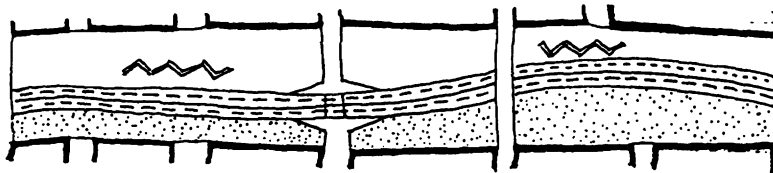
Principal circulations



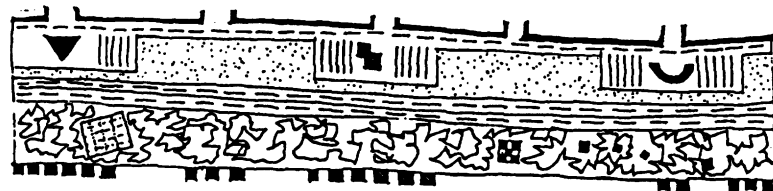
Recreational facilities



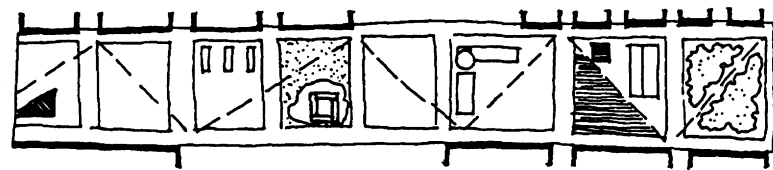
Bands and their event-structures



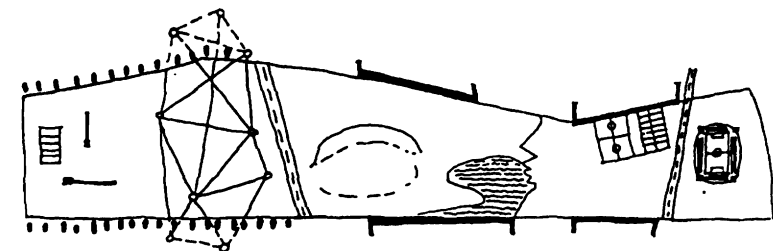
Band of connections  
*industrial park*  
*asphalt, parking*  
*autostrade*  
*greenery*  
*nouvelle ville*



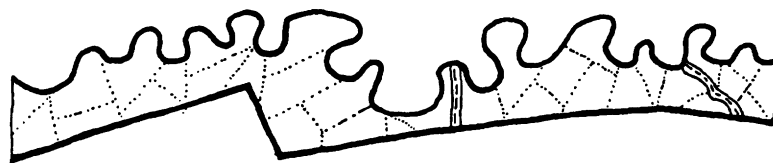
Band of circulation  
*secondary route*  
*park / "sièges sociaux" alternation*  
*autostrade*  
*woods with recreation, gardens,*  
*billboards*



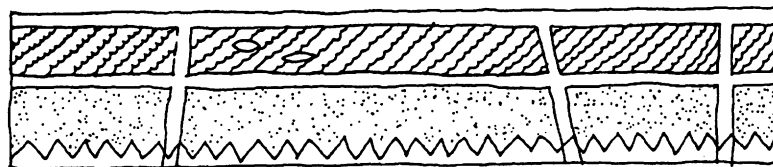
Band of programs  
*street*  
*existing elements: factory, forest,*  
*farming, park*  
*new elements: university, recreation,*  
*garden*  
*street*



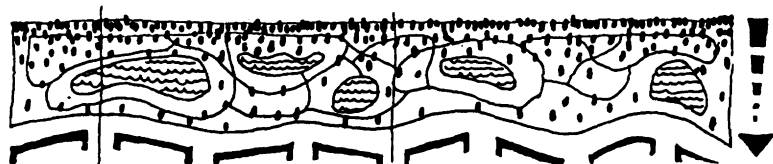
Band of landscape



Empty band  
*forest edge*  
*pasture*  
*building edge*

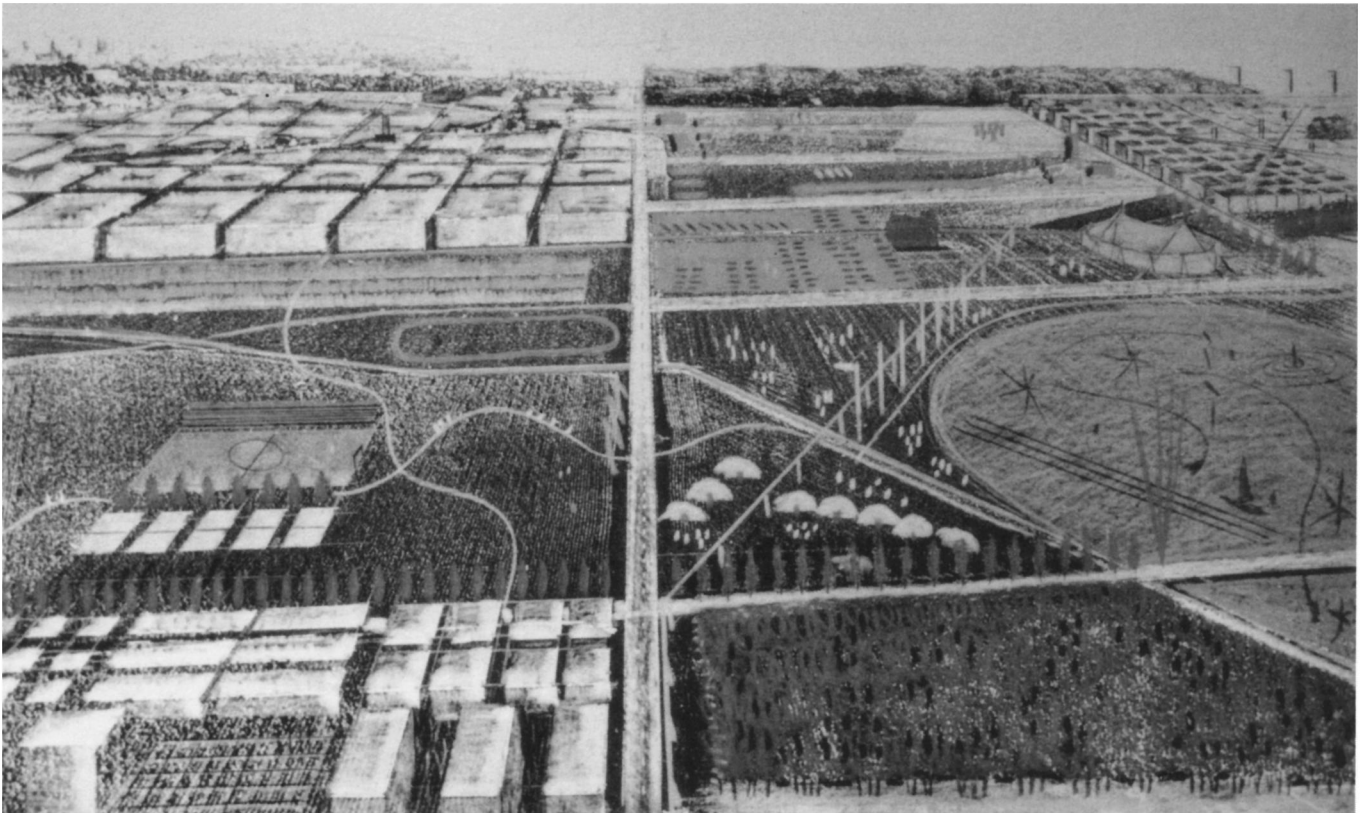


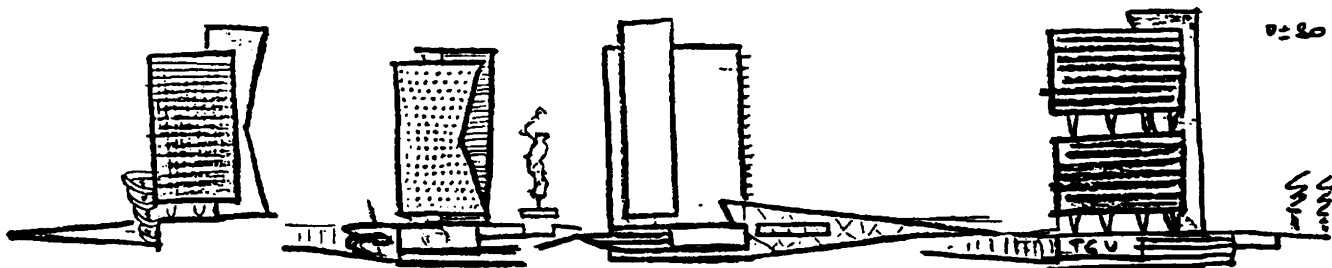
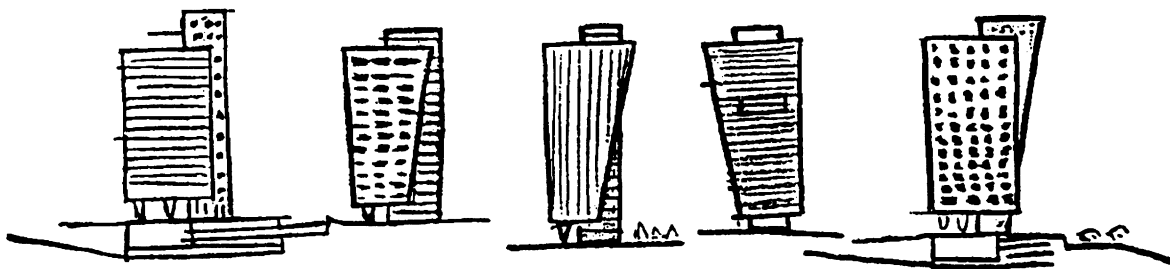
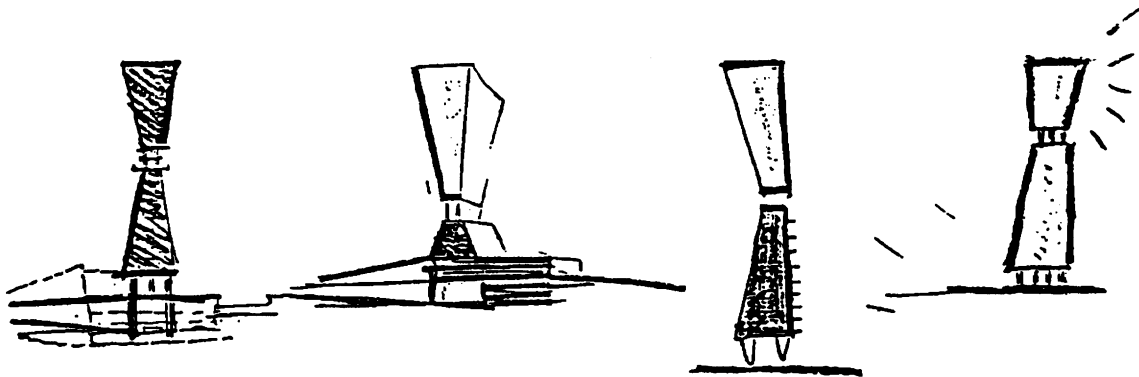
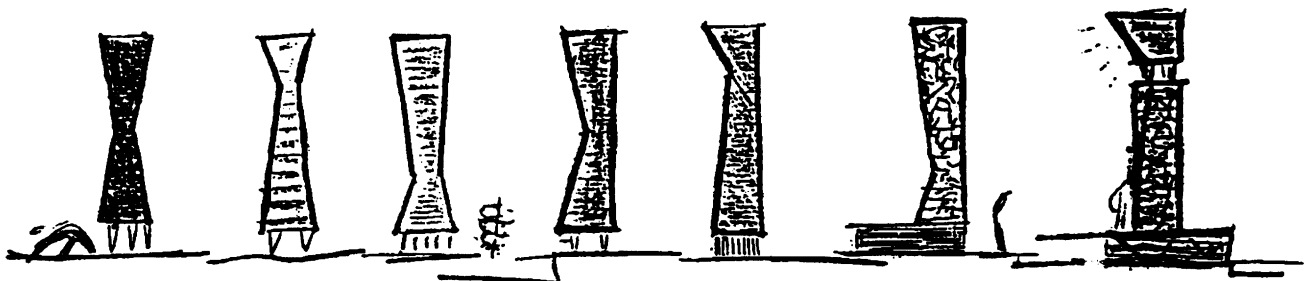
Border band  
*quay*  
*water recreation*  
*boulevard*  
*lawn*



Border band  
*countryside*  
*park with recreation*  
*rivière*

Aerial view





## Lille, 1989

Paradoxically, at the end of the twentieth century, the expression of the ambitions of Prometheus — the desire to change the destiny of an entire city — continues to be taboo.

The design of the project for Lille is based on the hypothesis of the experience of a Europe changed by the dual impact of a tunnel linking Britain and the Continent along with the extension of the high-speed TGV railway line. If this hypothesis is confirmed, the city of Lille — the center of gravity of the London-Brussels-Paris triangle with thirty million inhabitants — will suddenly become exceedingly important as the receptor of a wide range of typically modern activities.

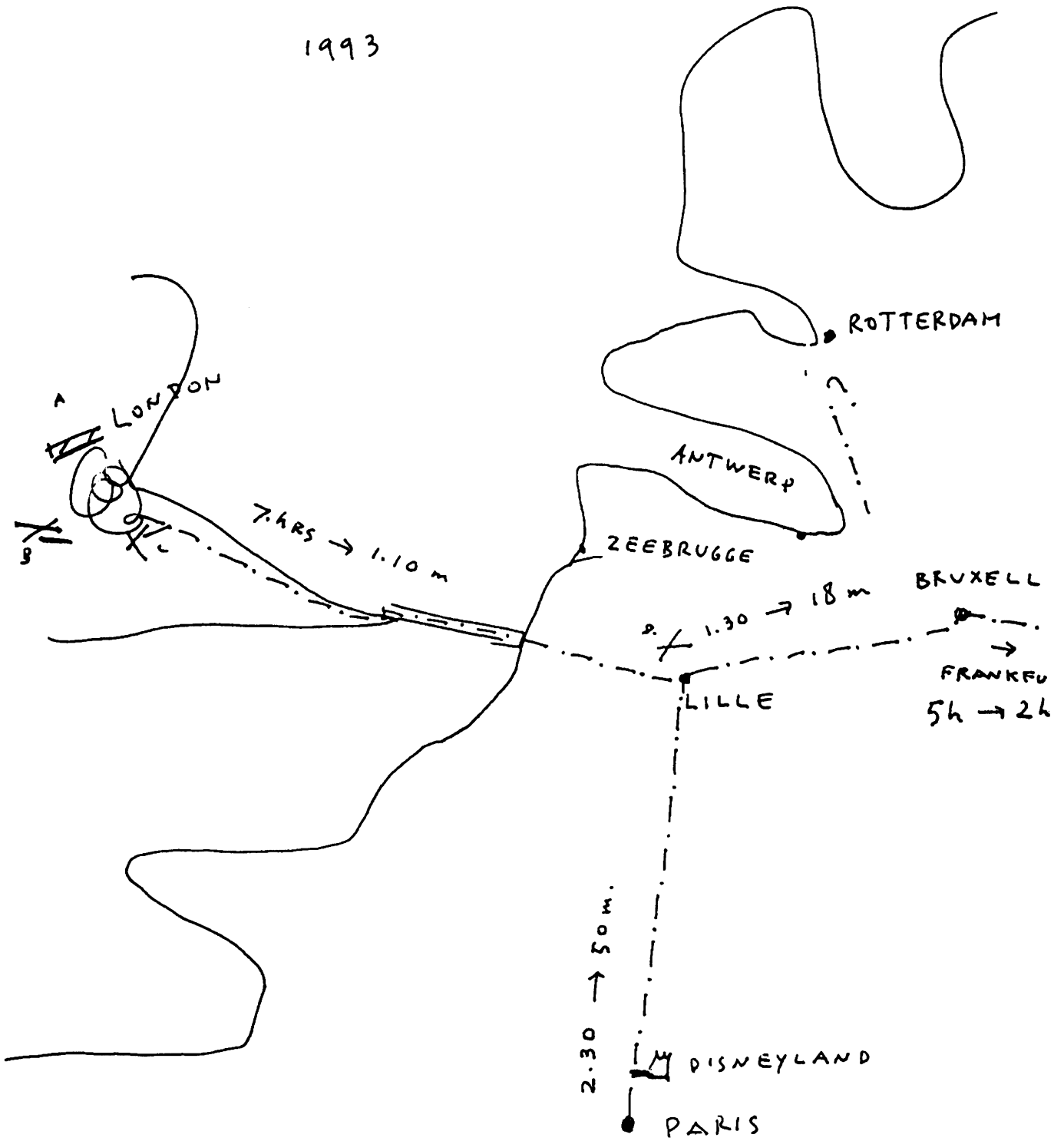
In the contemporary world, functional designs have become abstractions in the sense that they are no longer linked to a specific environment or city, but float and gravitate around the place in an opportunistic manner, offering the maximum number of relationships.

In Lille, the TGV line is projected for the site of old fortifications, now engulfed by a proliferating periphery. A gigantic futurist project will be built two paces from the old quarter, resulting in an uncommon, hybrid condition that will permit the insertion of activities considered to be peripheral into the heart of the city.

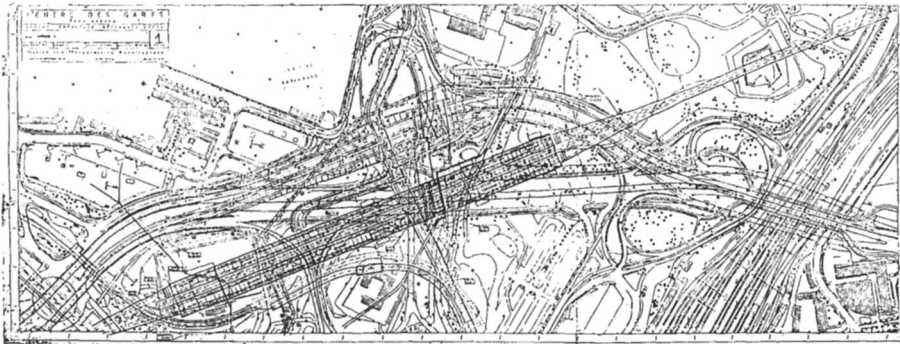
In light of these conditions, it is difficult to take a quantum leap into an exotic, imminent, radical future.

Future context

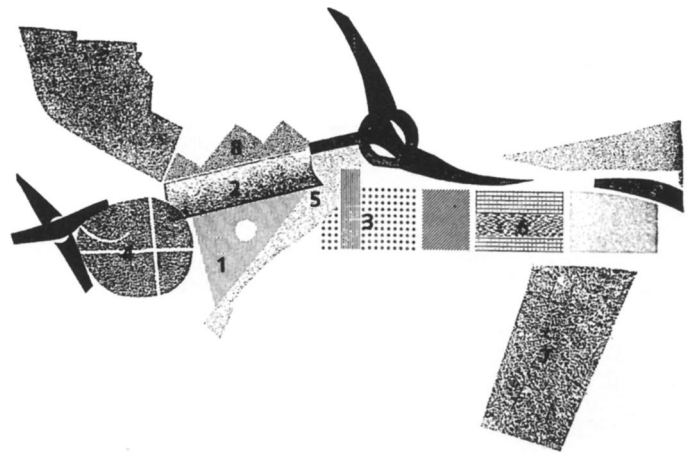
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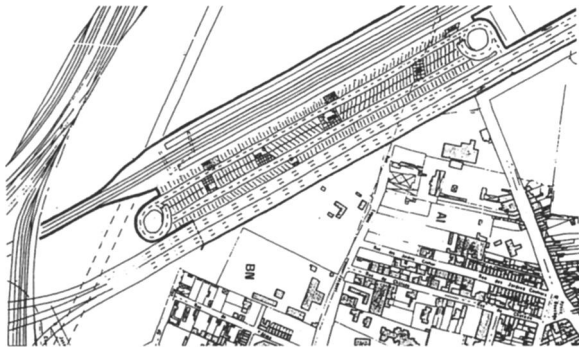
TGV line superimposed on the urban infrastructure



Preliminary collage showing programmatic sectors: 1. forum of stations, 2. business center, 3. "congrexpo," 4. Buttes de Lille, 5. reservation, 6. scientific and technical park, 7. Gare Saint Sauveur, 8. fringes



Invisible basis: subterranean foundation of the project on the site, a solid mass of infrastructure comprising the TGV, proliferating periphery, and, between the two, parking and access



Visible basis: the work of the script writer, the montage of programs



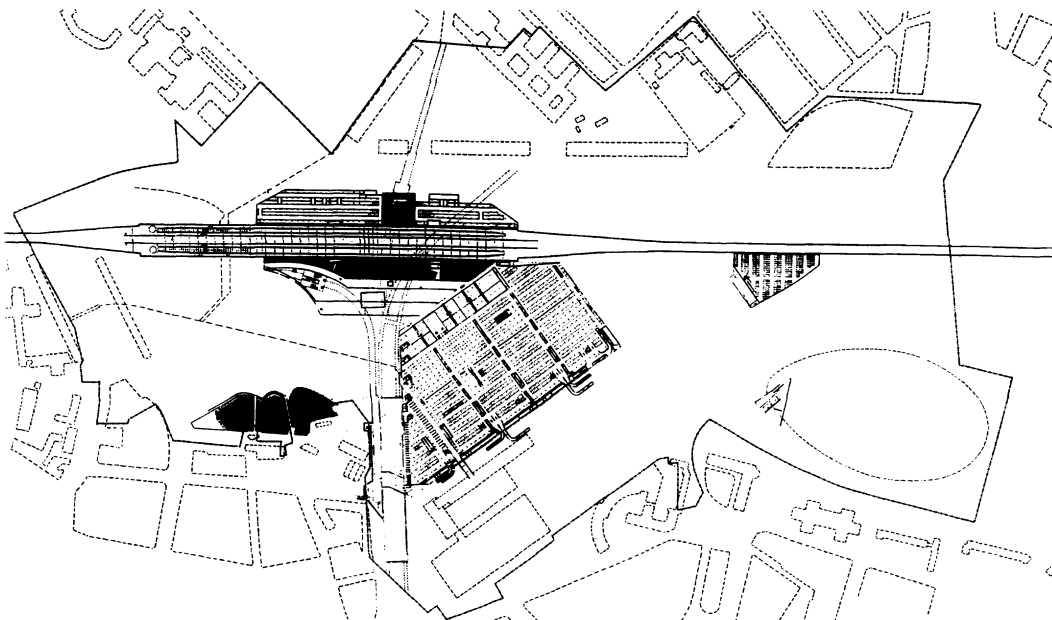
Aerial view of site showing  
infrastructural emplacements



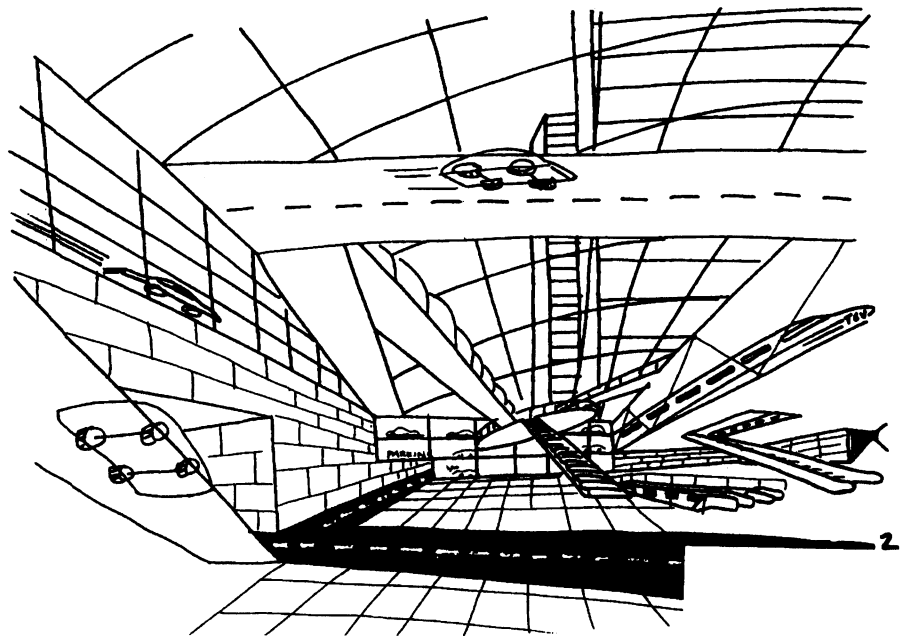
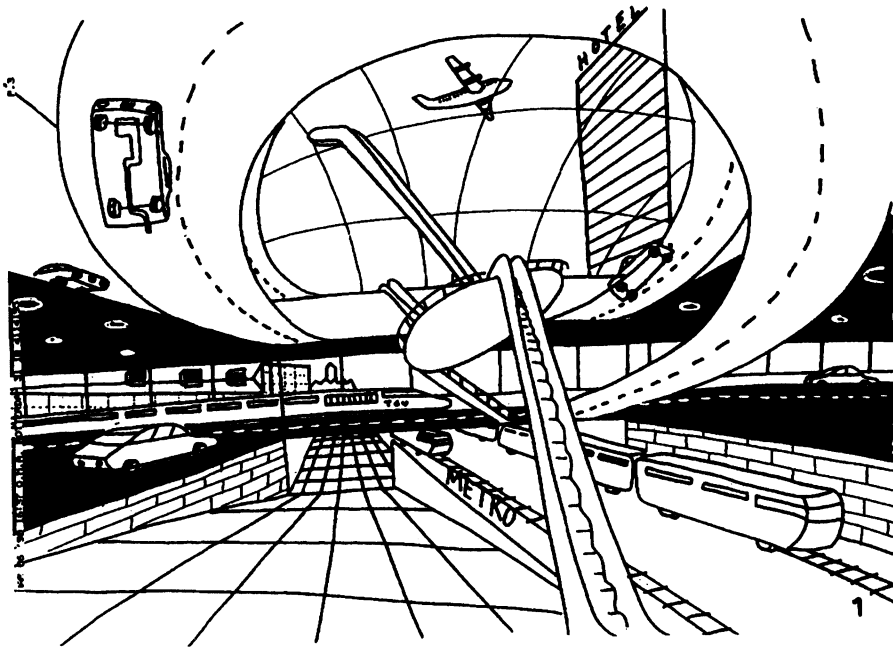
Plan of site



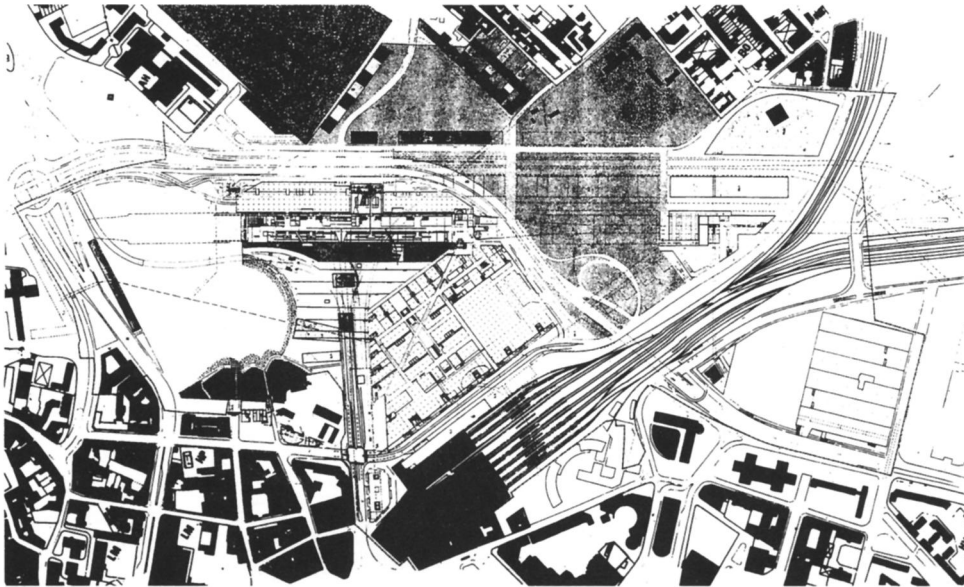
Plan of level +18m: parking and platforms of the TGV station



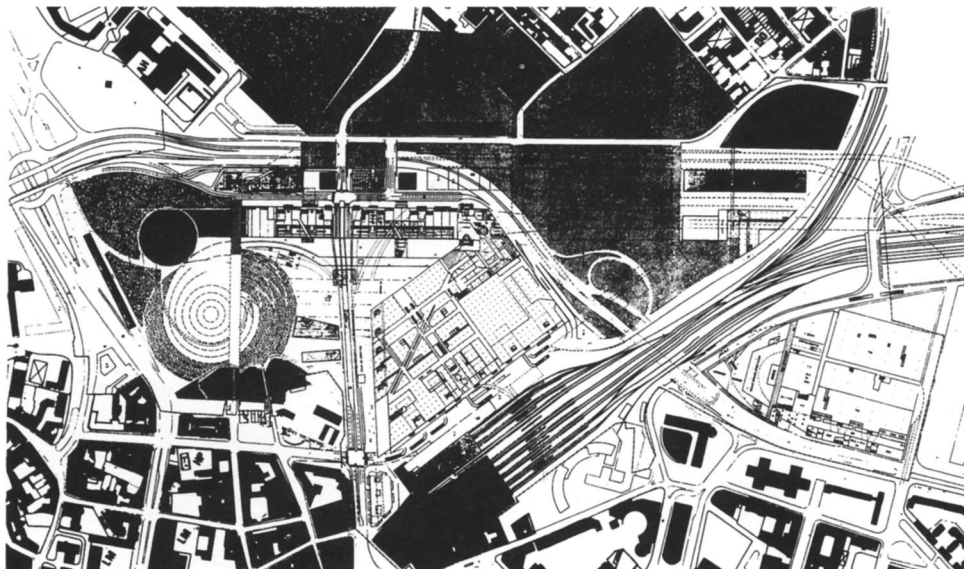
Piranesian space: delirium of infrastructure



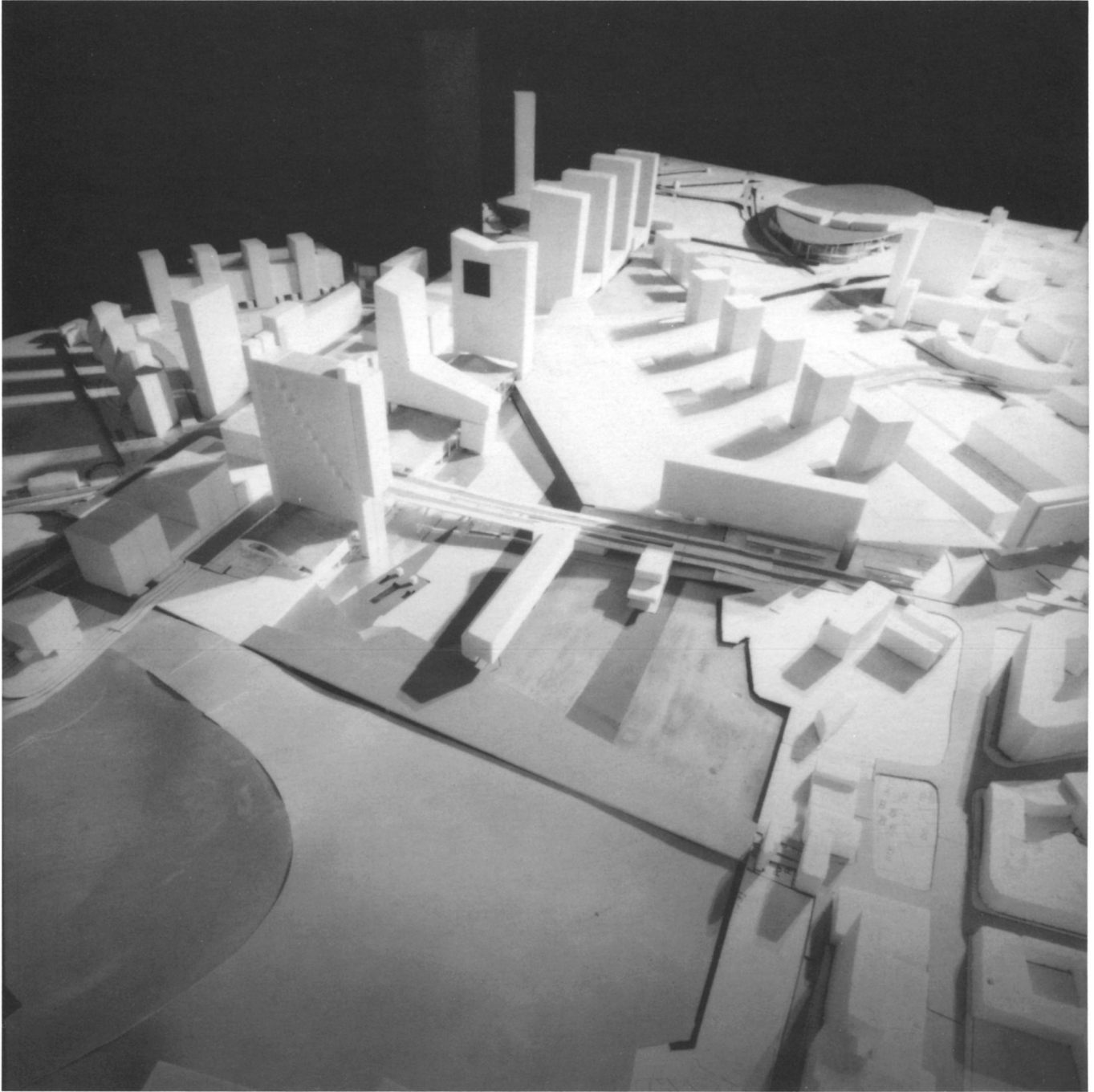
Plan of level +21.5m: gallery of the TGV station



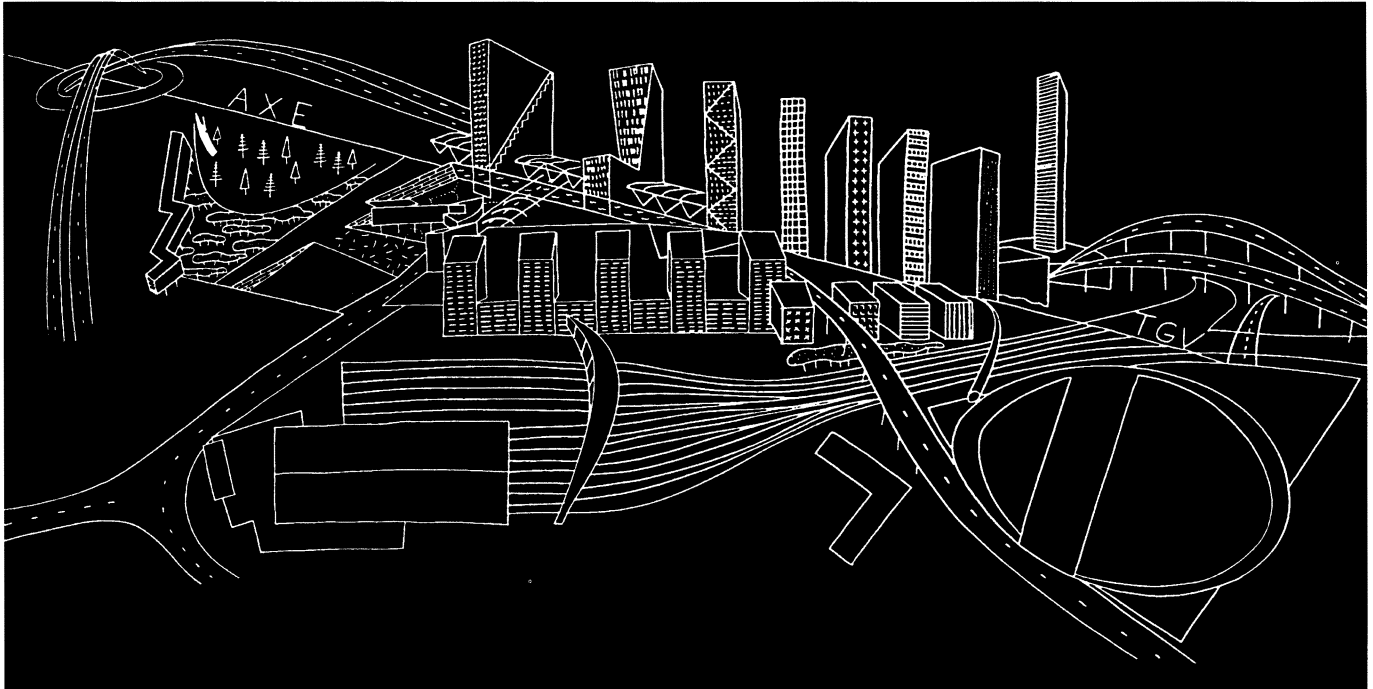
Plan of level +25.5m: business gallery



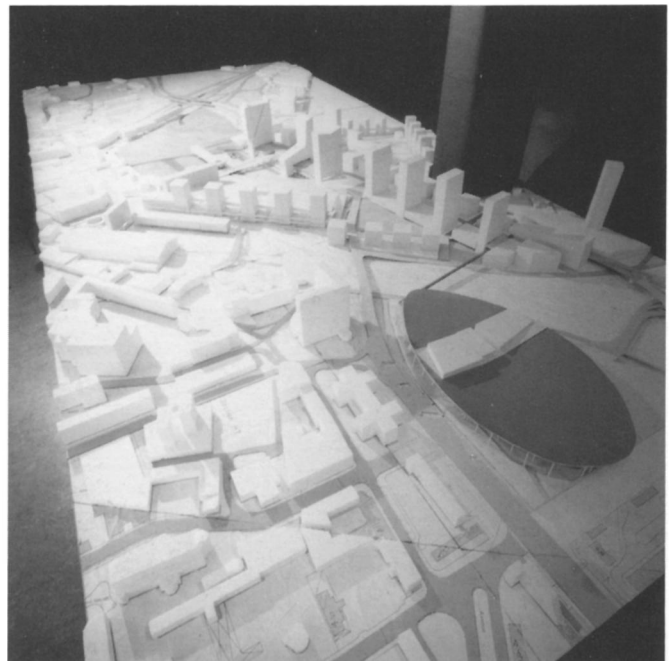
View of model



Sketch of infrastructure and effects



View of model





## La Défense, 1991

How can one begin again in Europe today?

We will consider La Défense, the territory of EPAD, as a strategic reserve that insures continued access to Paris but that also represents a zone of privileged expansion with a strong adaptive potential, allowing the city, the country, to attain efficacy. In short, this territory is a theater of progress.

After the (unexpected) outcome of the first district of the area, the question of the “prolongation” of the axis poses itself. The axis pierces through a construction zone; in its progression, it finds itself confronted with a dense and already rich context. We interpreted the idea of extension as a gradual and progressive transformation of a system, of a series of systems, in the “system” of La Défense.

If beginning again at zero is presently unthinkable — the *tabula rasa* a mirage definitely remote — the endurance of “modern building” is itself similarly circumscribed. Not only is the modern building constructed from materials poorly adapted to eternity, but it is a descendent of an economic logic that accounts for twenty, twenty-five, thirty years maximum, rendering it fundamentally *temporary*. So if one accepts that the existence of all modern buildings is precarious, a kind of *tabula rasa* may seem imminent enough. It suffices simply to wait (admittedly a very difficult idea today) for the buildings’ redundancy to impose itself, their reason to be to expire. Then this renewal-effect can inscribe itself in a classical tradition of construction, deconstruction, reconstruction.

To resolve a fundamental paradox — the obligation for society permanently to transgress precedents and the simultaneous impossibility of beginning again — we used these circumstances to demonstrate that it is possible to configure the critical mass of urban renewal through a strategy of modern urbanism that, beyond the utopia of *tabula rasa*, would translate the most banal economic realities.

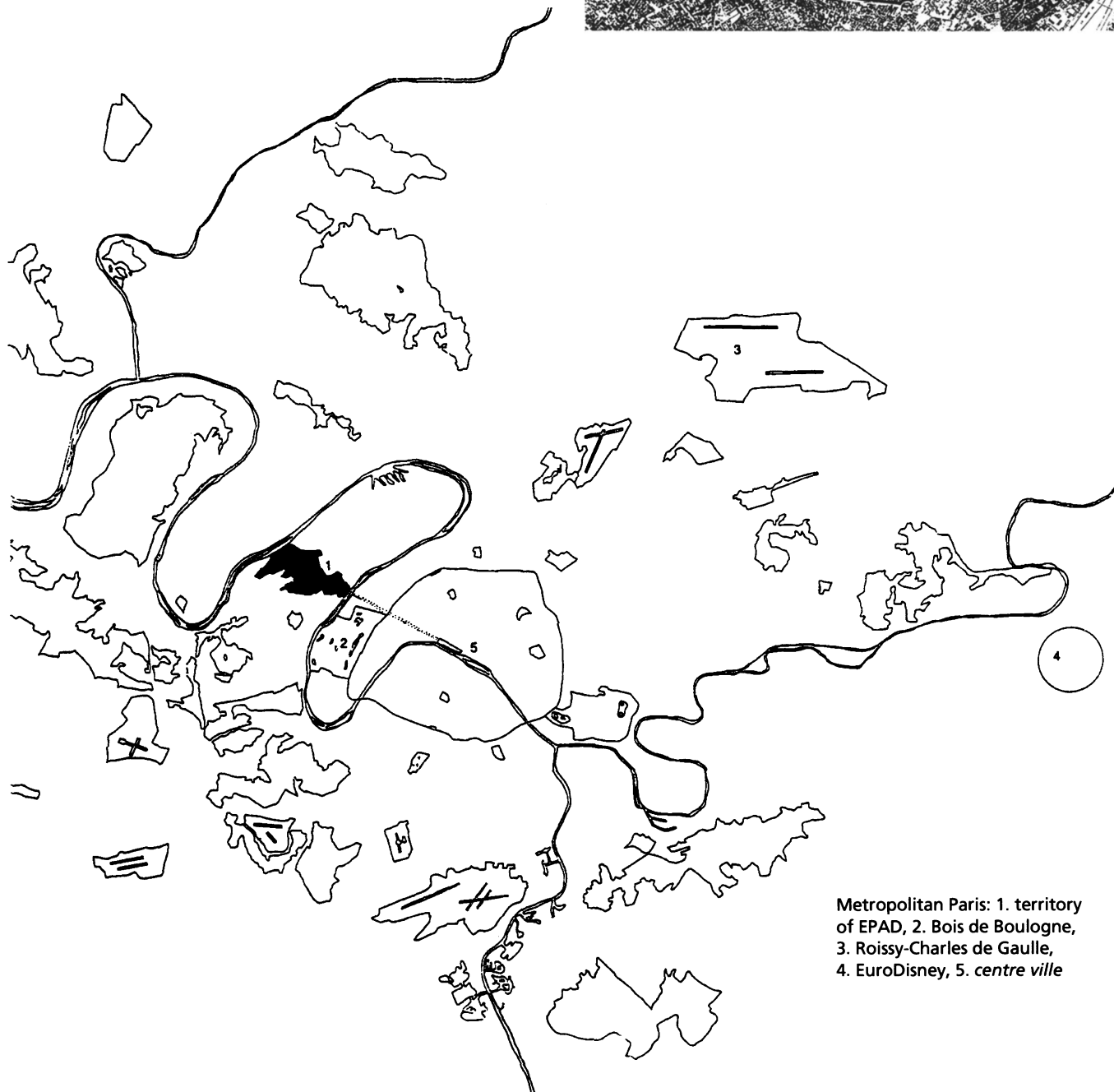
From the land as occupied today, we analyzed what would be the “available supplements” by periods of five years in order to discover a gigantic territory of potential availability. We are proposing, then, that the system of La Défense be conceptually understood as a new field, which will be fed by the infrastructures to come: auto routes, TGV, and so on.

The frame or grid proposed here is simultaneously notional and operational. Without subjugating its extension to any absolute scheme of development, it would form a filter that would isolate those elements whose right of survival is not contested — Nanterre, the university, the prefecture, the park — and, in another part, suggest the orientations most effective for an urban future.

The omnipresence of the framing grid does not imply a homogeneous density; the system will, rather, regulate the coexistence between masses and voids, full spaces and hollow spaces. To reach its ultimate coherence, it gives a premonitory identity to the fragments now isolated.

Around the “injections” of infrastructure, the grid can accommodate itself to a variety of intensifications. The existing axis becomes an incident in the frame; specific fusions would put “historical” fragments in context; the present La Défense would dissolve.

Existing site



Metropolitan Paris: 1. territory of EPAD, 2. Bois de Boulogne, 3. Roissy-Charles de Gaulle, 4. EuroDisney, 5. centre ville

Process of liberation: erasure of the site over thirty years



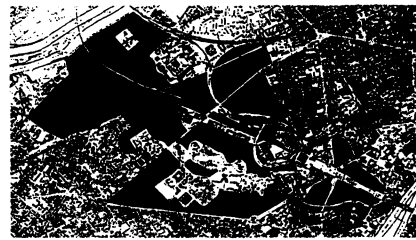
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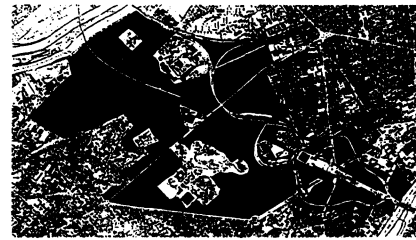
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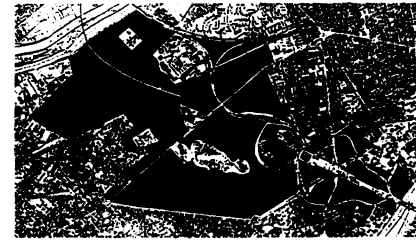
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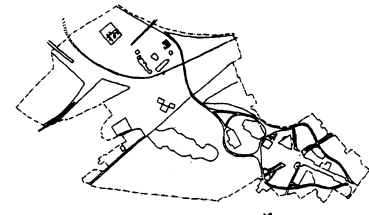


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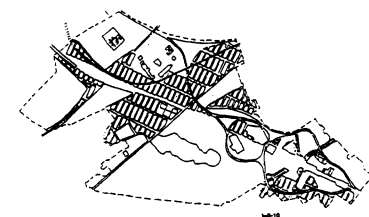


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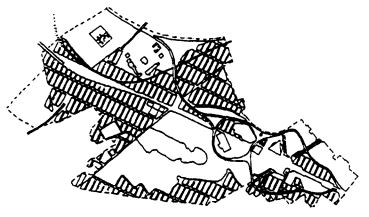
Process of reoccupation



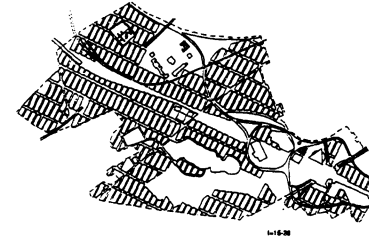
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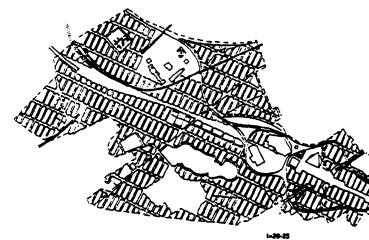
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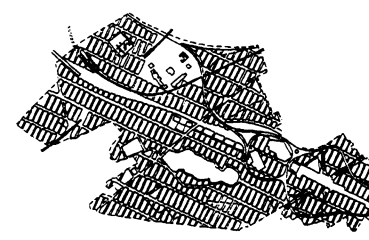
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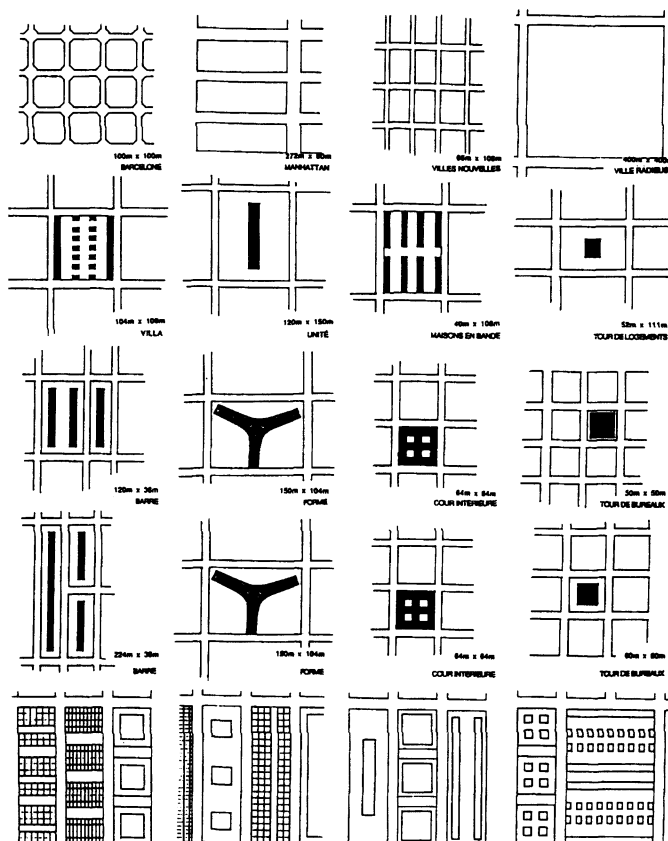
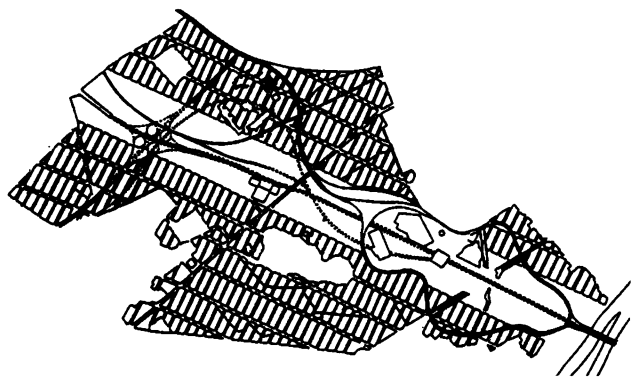


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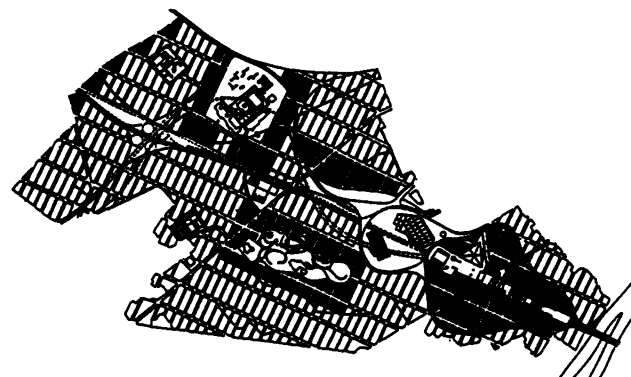


l=25-30

Reoccupation scenario 1:  
axe royale



Scenario 2: objects of density



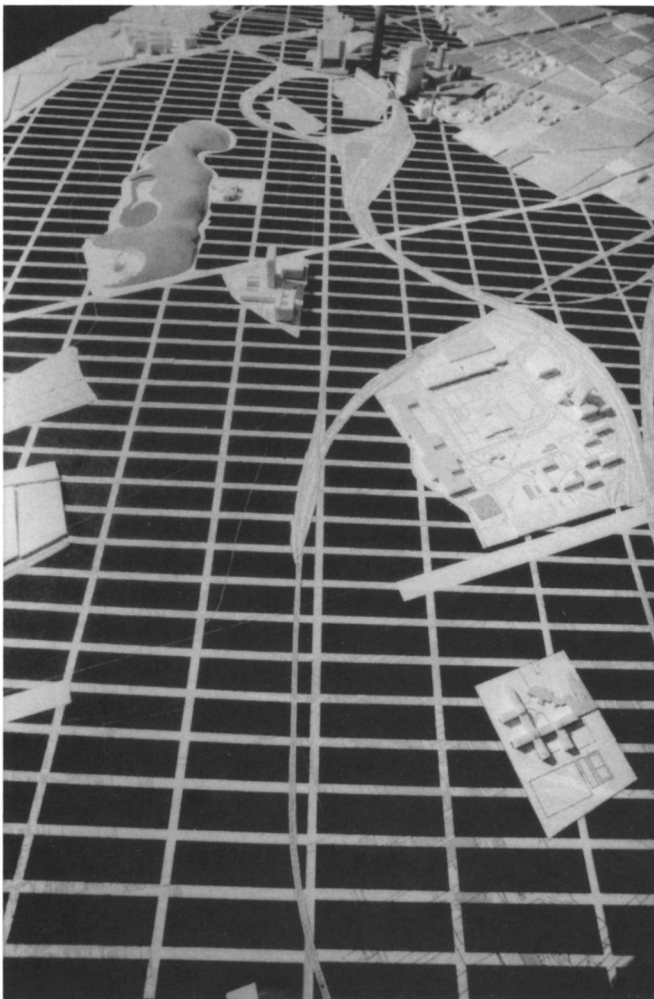
Scenario 3: dispersion



Grid study: (from top to bottom) typology of city fabrics, grid derived from the typologies of housing, grid derived from the typologies of mid-size office buildings, grid derived from the typologies of large office buildings, the most favorable grid for housing and offices.



Occupation of the grid:  
avenues, streets, and alleys



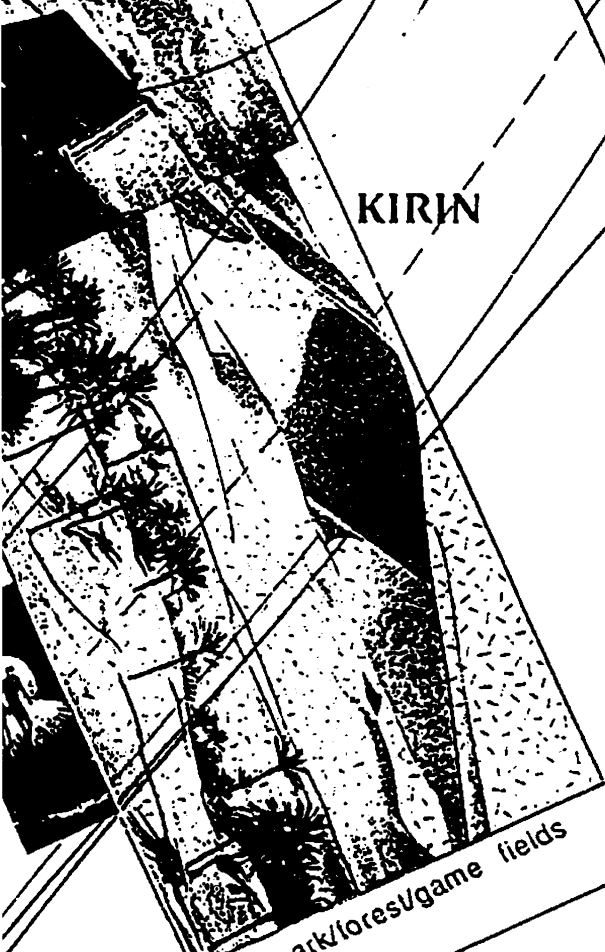
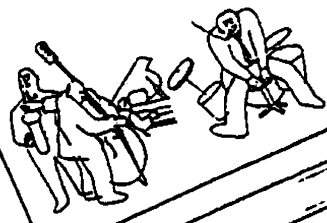
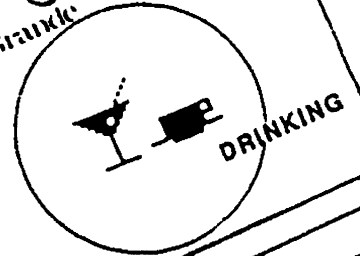
View of model looking toward existing La Défense, with grid exposed. The five existing "eternal programs" remain despite the grid (even if their architectures may not): (from foreground) prison, Université de Nanterre, train station, park, Cité Administrative

177 172 558

mazda



KIRIN

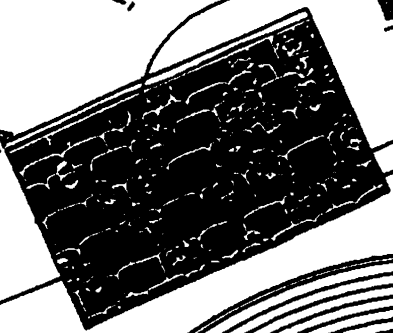


park/forest/game fields

men's big

Port Yokohama 30

CINEMA



展示会場

EXHIBITION



## Yokohama, 1992

From the outside, the Japanese city seems a mere coexistence of random architectures in a field of maximum freedom. There is no planning, no public realm. But Yokohama deviates from the Japanese norm; through its commitment to urban design it could become a laboratory for the definition of a “Japanese” public realm.

The point of departure for this project — maybe it should be called hypothesis — was the unique conditions that we found on the site: the presence of two markets with a colossal number of parking places, the access to the site by railroads, cars (on the new highway), and ships, and the proximity of “Minato Mirai 21,” a tremendous injection of density in an already congested urban condition. Together these factors define a site of almost unlimited potential for supporting public life.

We have avoided the design of buildings (with their inevitable limitations and separations). Continuous and formless, the project engulfs the site like a kind of programmatic “lava,” three layers of public activity manipulated to support the largest possible number of events with the minimum amount of permanent definition.

Noticing that the “peak hours” of the market fall in the early morning, our hypothesis proposes a complementary spectrum of events that would fill the twenty-four-hour cycle with a montage of successive and simultaneous peaks. We exploit to the maximum the location and its existing infrastructure to create a twenty-four-hour “peak” comprising a mosaic of heterogeneous twenty-first-century “lives.”

Some parts of the project are used as roads, some as parking places; minimal interventions “provoke” theaters, cinemas, dance halls, restaurants, churches, places for sport, and other programs. The new givens of access, communication, artificiality, and technology are frozen in a momentary configuration.

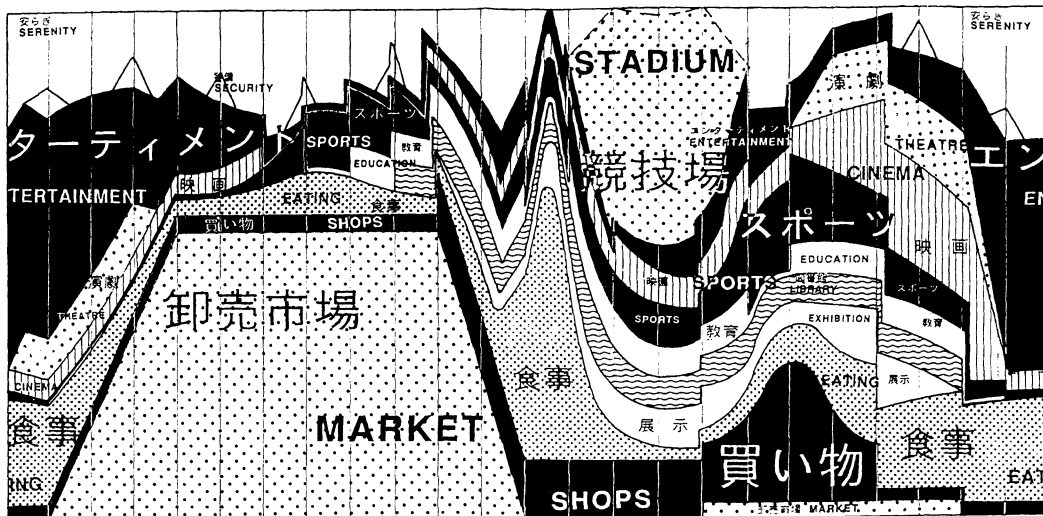
Covering the southeast corner of the site, this programmatic tapestry leaves an area of the former docks intact. A series of ideal conditions exist there for an intense housing development: openness and density and views of the sea.

Toward the city is a site for a small “center” that, together with the housing, will give a degree of three-dimensional “anchoring” to the site.



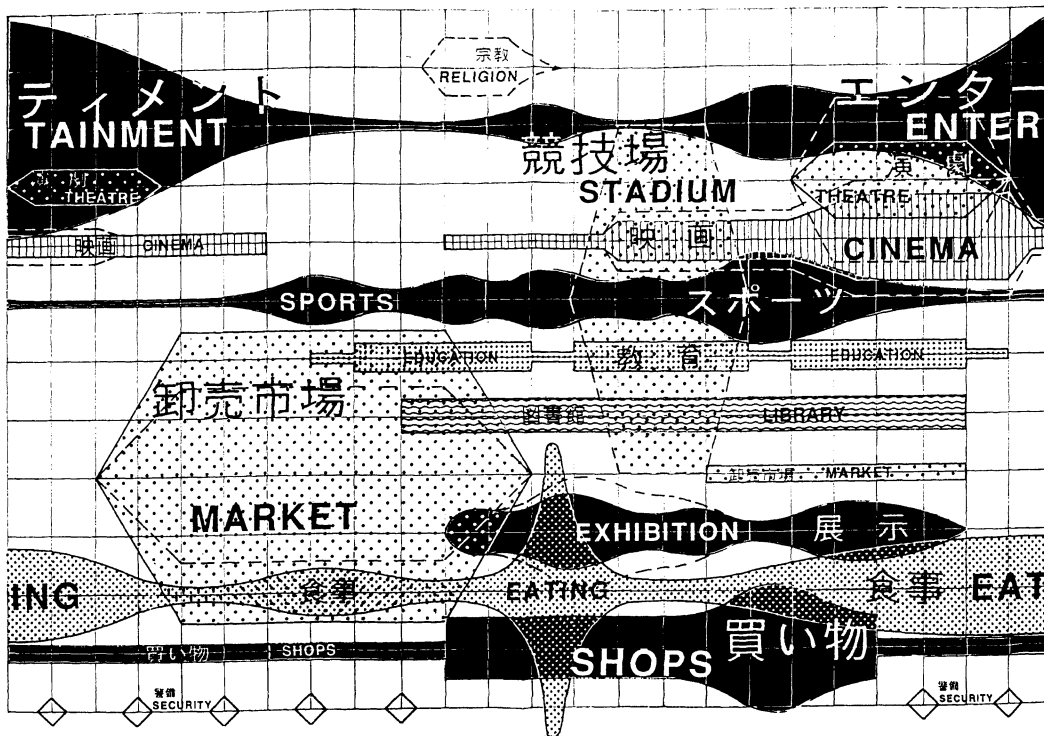
Plan diagram: structure of events

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24



Montage of programs

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24



Time/use diagram

Views of the model

