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## Transparency revisited

Mark Lee

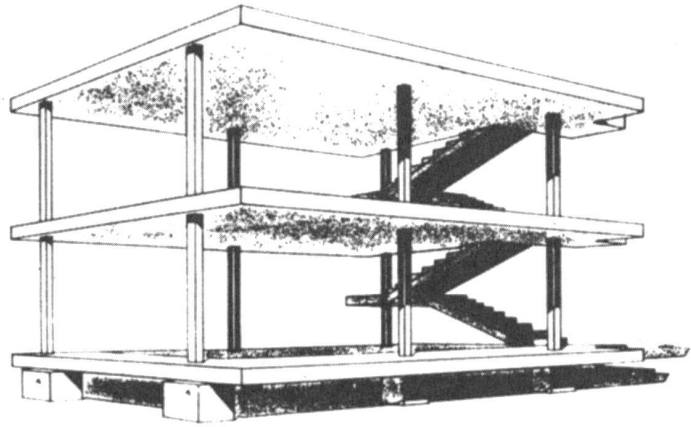
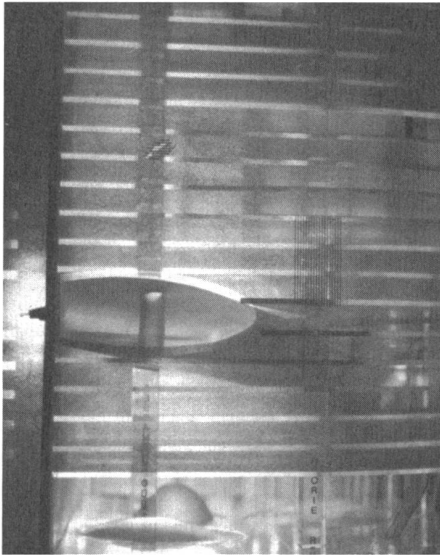
*"What would Concrete, what would Steel be without Mirror Glass?"*

*Mies van der Rohe'*

Introduced into modern architectural debate since *Die Gläserne Kette*, the presentiment of transparency has been a recurring apparition in modern architecture the last seventy years. Advocated by Sigfried Giedion and differentiated by Colin Rowe, its doctrines seem to have all but exhausted the subject matter. One might therefore question the relevance of its discussion in the contemporaneous context; in other words, why transparency? Or more precisely, why transparency now?

On one hand, in architectural practice, technological evolution of the curtain wall and the ubiquity of electronic media has brought about a fascination with the transparent, its material variations, and its various simulated properties. Attempts to redefine transparency are encapsulated in the Museum of Modern Art's *Light Construction* exhibition of 1995, which examines emerging architectural possibilities underlying different methodologies. Regarding transparency as a categorical normative effectively binds separate practices into a simple ensemble. When being deployed as a collective term, however, it is only instrumental in elaborating general affinities in technique, form, and effect. The efficacy of this exhibition lies in its propagation of a dialectic embedded within the suspicion of vision while maintaining an emphasis on light. Concurrently, it bears a danger of dissipating the inherent tension of transparency into a prevailing aesthetic; focusing the issue of transparency to a fetishism of spectatorial indulgences.

On the other hand, such dispositions and their inferences are further advanced by the critical establishment in the dawn of this "new materiality"; who, often to the exclusion of functional concerns, concentrates on the surface readings. Whether developed as means of representing man's alienation from society in Jose Quetglas' *Fear of Glass*<sup>2</sup>, or as a reconciliation between the object and the subject in Anthony Vidler's *Transparency*<sup>3</sup>; the



1 Mies van der Rohe 1933, quoted in F. Neumeyer, *The Artless World: Mies van der Rohe and the Building Art* Cambridge, MIT Press p. 314

2 See Jose Quetglas, *Fear of Glass*, Published in *Architectureproduction*, edited by Beatriz Colomina, Princeton Architectural Press, New York 1988

3 As Vidler suggests, the tension of the glass surface instigates a reconciliation between the subjective and the objective world by its veiling and unveiling of the interior as well as its reflections of the surroundings. See Anthony Vidler, *Transparency*, *The Architectural Uncanny*, The MIT Press, Cambridge MA, 1992

4 Toyo Ito, *The Visual Image of the Microelectronic Age*, *The Japan Architect JA Library* 2, 1993

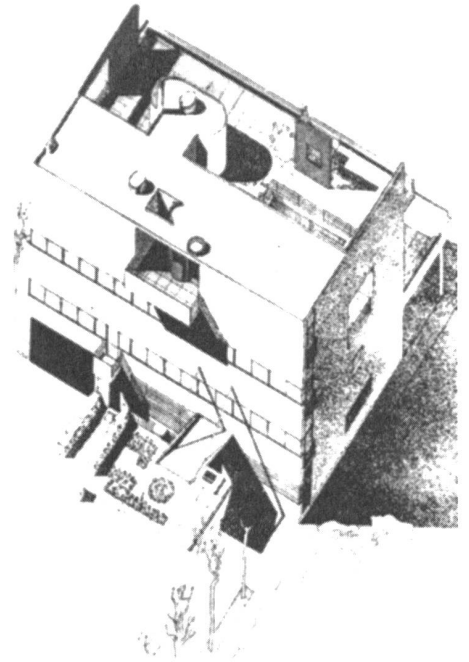
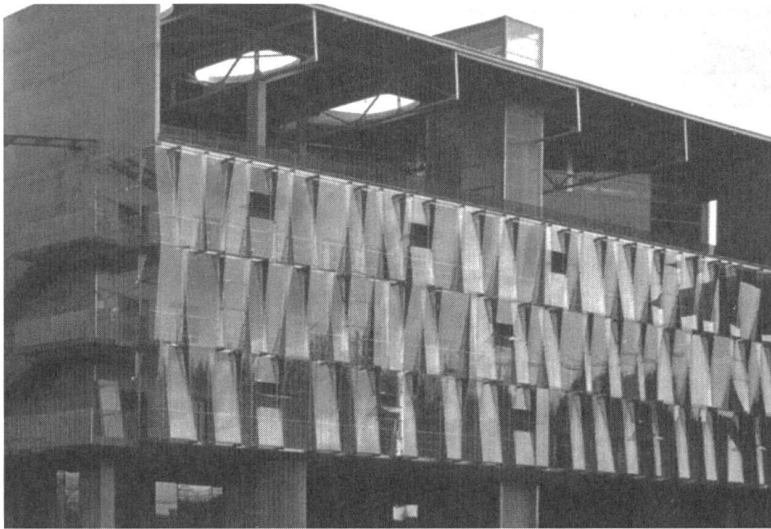
5 See Anthony Vidler, *Transparency*, *The Architectural Uncanny*, The MIT Press, Cambridge MA, 1992, pp. 221

comprehension of transparency has been diffused through expanding analogies. Despite the categorical differences among the properties - whether transparency, translucency, opacity, or reflectivity; or of what they infer - whether the alienation of man, or the veiling and unveiling of the subject and the object; the inherent limitation of such categories lies in the fact that they inevitably fall into the realm of materiality. Furthermore, what is intriguing is that both Quetglas and Vidler circumscribe an attitude around where this discourse of materiality should be located in architecture.

Toyo Ito accurately summarizes this predicament: "Today, everything is simulation ... we can modify the relation between the real and the unreal with the simple movement of the image ... when all of society is homogenized, wrapped in a huge piece of wrapping paper, one thing we can still do is observe the surface of the wrapper, rather than pretending that the contents seem to be real. And the fate of architecture will then depend on how we find a structure in this fictional situation ..."<sup>4</sup>

Not unlike the circumstances of *Die Gläserne Kette*, the idea of transparency is once again localized on the battle fields of the building skin. Before, the principle task of architects was the designing of the frame and the glass was treated as an enclosing skin - almost a secondary part of the architectural intention. The difference now is that the technological proficiency of double glazed walls, stenciled alabaster, perforated screens, and photo chromic glass has transformed its effects from the position of a surrogate to an intentionality in the design process. Subsequently, facing the challenges and the uncertainties generated from invisible technologies, architects retreat to focus on what is visible, tangible, and known. They concentrate the endeavors of this concern on an attitude towards the detail, as Ito had suggested, inhabited on the vertical surface.

This manipulation of materiality for a discursive effect is apparent in the envelope of Rem Koolhaas' French National Library, in which Vidler differentiates between transparency and translucency as "a confirmation of transparency and its complex critique"<sup>5</sup> In Koolhaas own words these dif-



ferent diaphanous skins are "sometimes transparent, sometimes translucent, sometimes opaque; mysterious, revealing, or mute..."<sup>6</sup> These effects are amplified by being stretched from edge to edge of the building; thus unlike a Miesian pavilion, the skin becomes the form, obliterating the frame to attain a formless quality to the mass.<sup>7</sup> This hierarchical reversal, transferring the design intention from the frame to the form, is given further credence in the west facade of Koolhaas' Congrexpo in Lille. Here a matrix of principles for facade composition is compiled, where six types of 10mm security glazing, varying in size, shape, and position are arranged from 1.5m to 2m modules with a 0.5m depth, with tempered horizontal glass ribs as reinforcement. These glazing panels - rectangular to trapezoidal, leaning in or out from the vertical, produce effects that accommodate the various intensities of transparency according to the different viewing angles of their spectators.

## THE CONCEPTUAL AND PERCEPTUAL DICHOTOMY

*"And when, I wondered, would I rise at last above all this stuff, the accidental, the merely phenomenal, the wasteful and randomly human, and be fit to enter higher worlds?"*  
Saul Bellows, *Humboldt's Gift*

Addressing the discourse of transparency to the envelope is reminiscent of last decade's bias towards the cultural significance of the building's facade. Replacing the Neo Historicist susceptibility, is an inclination for simulated Virtual Reality, cross-dressed in Modernist guise. Precariously belonging to a terrain that architectural discourse has yet to transgress,<sup>8</sup> it prompts to the current question - how does one begin to relocate the discourse of transparency away from the domain of materiality and from the location of the vertical surface? Or more importantly, to where is this transparency located?

These questions correspond to a double and wider phenomenon within the critical establishment. To substantiate a clear overview, one has to first identify two conditions of transparency in architectural theory - a physical

*Abbildungen (vlnr): Model Facade of the French National Library: S,M,L,XL, Rem Koolhaas, 010 Publishers, pp.656*

*Dom-ino: Mathematics of the Ideal Villa, Colin Rowe, MIT Press, pp.24*

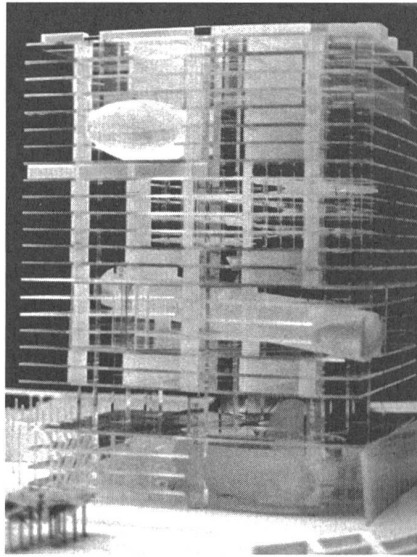
*West Facade of Congrexpo: OMA/Rem Koolhaas, El Croquis 79, pp.43*

*Villa at Garches: Ibid. pp. 23*

*6 Rem Koolhaas, S,M,L,XL, 010 Publishers, Rotterdam 1995, pp. 654*

*7 Robert Somol, The Camp of the New, ANY No. 9, Anyone Corporation New York 1994, pp.53*

*8 As Jeff Kipnis notes: "While the new right has begun dumping the Neo-historicist for the New Minimalists with shocking alacrity:" in Recent Koolhaas, El Croquis 79, 1996 pp. 37*



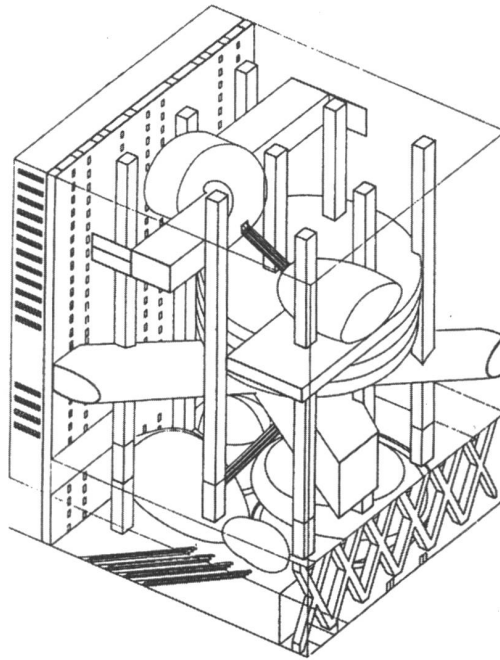
9 Rowe and Slutzky criticizes "that the equivalent of carefully calculated Cubist compositions will be discovered in the haphazard superimpositions provided by the accidental reflections of light playing upon a translucent or polished surface" is the critical bias of reading transparency. By doing so, they transpose their interpretations grounded on Cubist pictorial assumptions to the reading of phenomenal transparency in architecture. See Colin Rowe and Robert Slutzky *Transparency: Literal and Phenomenal* (part 2) *From Perspecta* 13/14 (1971)

condition and a conceptual condition. The former bears its intention on tactics; the second, while not exclusive of the former, converges on the notion to strategies in design.

Today, critics have once again ventured into a territory too tainted since Colin Rowe's dismissal of physical transparency as a myth of early modernism; consequently leading to the demise of the material aspects of the glass surface within architectural discourse. Whether the transference of its spectacle to figural superimposition, or the expansion of its meaning into the realms of psychoanalysis, most criticism falls into the predicament of categorizing inflected materiality. In this sense these notions perform the similar task of a categorical confinement, as a prison does for societal oddities. Subjugation by definition is limiting, for by relentlessly focusing on effects it avoids critical distinctions beyond the different physicalities of transparency. These interpretations signify a reactionary departure from Colin Rowe and Robert Slutzky's seminal forty-year-old article *Transparency: Literal and Phenomenal* - arguably, the only delineation and detailed elaboration that exists for the dichotomy between the realms of perception and conception in transparency.

The significance of Rowe and Slutzky's differentiation of a 'literal' and 'phenomenal' transparency lies in its predilection of a conceptual phenomenon deployed for the production of perceptual effects. They criticize the affiliation of transparency with glass architecture; and make a distinction between a conceptual idea and its uncritical interpretations into a material phenomenon.<sup>9</sup>

However, Colin Rowe's essay is often difficult to discuss today without the evocation of architectural movements prompted by this text in the last forty years. In light of the present discussion, a re-examination of transparency merits an exorcism of sorts, in order to once again, open up this concealed situation. Most noticeably, inherent in Rowe and Slutzky's deductive dialectic underlies two rather problematic presumptions. The first, critical but not lethal, is that in order to concoct Slutzky's pictorial pheno-



menon one has to assume Cubist pictorial prerequisites such as shallow space, overall armature, and their relevance to modern architecture. It bears the danger of focusing exclusively on the reduced representations of plans and sections as a basis of reading, "whereas in painting the relationship of the forms can be used to create the illusion of space, in architecture the relationship with the form is the space."<sup>10</sup> The second presumption, much more potent, is that by transposing the pictorial readings in architecture, Rowe also transposes the beholder; which in the case of painting is relatively static. For while painting is understood through perception, architecture is through the sum of many perceptions.<sup>11</sup> Thus Rowe and Slutzky's inclination for frontal pictorial readings presupposes a predominate linear axis in order to allow the play of shallow space to be read. Instead of inoculating static space with the forth dimension, this presumption transposes 'from still life to still life.' In other words taking 'space-time' out of the formula of modern architecture.

Rowe and Slutzky's analogy of formal similarities between architecture and painting via prioritized deciphering of the plan and section, not only gives impetus to a preoccupation with shallow spatial readings but also leads to the domination of an axial linearity. These problems perpetuate interpretations summarized by two species of architecture. The first type, as epitomized by the projects of Richard Meier, propagates multiple readings within a shallow space. It often manifests itself in locating the reading of transparency in the interstitial spaces presumed by a frontal linear axis.<sup>12</sup> The second type, as consecrated in the projects of Peter Eisenman, prioritizes analytical syntactic readings within the design process. Often deploying Le Corbusier's Dom-ino as a normative for transformation, it manifests itself in diagrammatic abstractions of interrelational structures,<sup>13</sup> where the isolated representations of plans and sections become the pre-eminent references.

Given these consequences of diagrammatic pictorial manipulations within shallow spaces, one has to recognize the circumstances under which the essay was written. Subservient to the omnipotent hegemony of the

*Abbildungen (vlnr): Model of the French National Library: S,M,L,XL, Rem Koolhaas, 010 Publishers, pp.652*

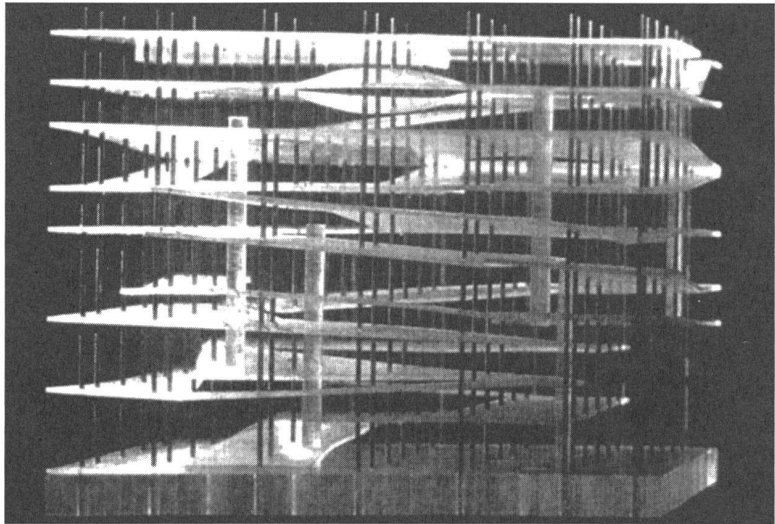
*Axonometric of the French National Library: OMA Rem Koolhaas, Electa, pp. 134*

<sup>10</sup> Peter Eisenman *From Object to relationship II: Guiseppe Terragni Perspecta 13/14 1971*

<sup>11</sup> Peter Eisenman *From Object to relationship II: Guiseppe Terragni Perspecta 13/14 1971*

<sup>12</sup> "to concentrate attention, not upon the three-dimensional or spatial aspects of phenomenal transparency, but as far as possible upon its two-dimensional manifestations - upon phenomenal transparency as pattern." Colin Rowe and Robert Slutzky *Transparency: Literal and Phenomenal (part 2) From Perspecta 13/14 (1971)*

<sup>13</sup> This responsibility is partially due to Bernhard Hoesli's analysis of the implied layering of space after the thesis advanced by Colin Rowe and Robert Slutzky. Through further case studies, Hoesli attempts to transform their thesis into a design tool by means of diagrammaticized analytical structures.



14 Rem Koolhaas, *Delirious New York*, Thames and Hudson Ltd. London, 1978

Bauhaus, Rowe and Slutzky's critical agenda against its doctrines underlay their zealous exigency for a grounded definition of a conceptually based transparency. If one could cast aside their deterministic biases and the architectural movements encapsulated by their essay, perhaps one could suggest a more positive vantage point for transforming an analytical into a generative design tool.

In order for one to extrapolate the latent possibilities of transparency relative to today's condition, such a vantage point would begin with a conceptual notion. For example, since conceptual transparency has been illustrated in a two-dimensional shallow space by alienating architecture from its necessary three-dimensional existence; if one were to set the same problem for an architecture that carries conceptual transparency beyond shallow space - into the realm of the fourth dimension; a necessary first step, would be to provide a locale whereby such relationships could be deployed.

#### SHIFTING LOCATIONS

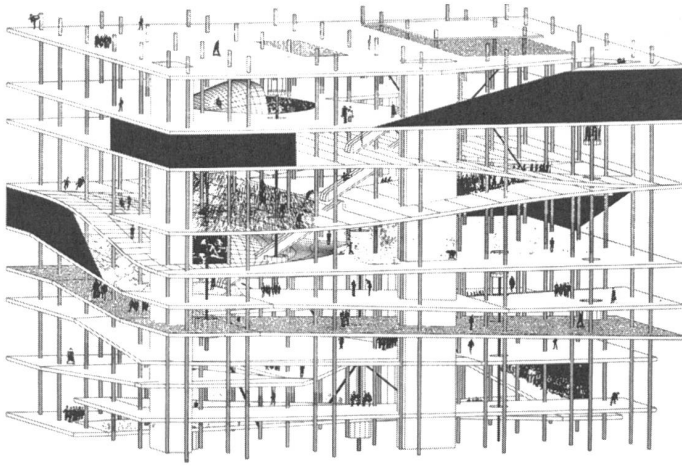
*"What Noah needed was reinforced concrete. What Modern Architecture need is a flood."*

Rem Koolhaas<sup>14</sup>

The bias of material over programmatic concerns is exemplified by projects in Light Construction where the various material effects are undermined by an unapologetic rigidity in planning. If the optimism for conceptual transparency is once again misplaced, could its position be deduced from following its evolution from the frame to the form, to the third of Vitruvius' triad - *Utilitas*?

Despite their preferences for the pictorial, Colin Rowe and Robert Slutzky point toward a transparency that is purely organizational. Rather than advancing their analogy through deductive expansion such as that of Bernhard Hoesli's, an introspection into the precepts of design might lead to a more specific and architecturally localized model. Thus, instead of a discussion of transparency pertaining to a formal discourse, consider one





that inflects events. In place of the predominance of perception focused on the surface, consider the primacy of the concept of transparency within the realm of space and events. The potential of these activities poignantly aims at a reinterpretation of Rowe's pictorial reading, suggesting an organizational transparency, where the terrain of space is intrinsically pregnant with the inference of use

If the artist Frank Stella could manipulate the balance of figure and ground, whether the distortion of the object by the field or vice versa, couldn't architects do the same, organizing the functions in a similar objective, detached way? In other words, to what extent could the painterly narrative shed light on the organization of activities in building? Raising these questions proves stimulating; for the most formalistic operations, conceptually applied to functionally specific spaces, accommodates the possibility to challenge both the uses of a program and the boundaries of spatial definition.

Similar to the way Malevich establishes economy as the Fifth dimension in his work, organizational transparency stretches the Cubist notion of transparency and compresses it into the architectural notion of program. This understanding expands beyond the fetishism of materiality and departs from the hibernation of transparency within the building surface. It points to possibilities of use - a conviction that more than any other, has defined modern architecture and planning.

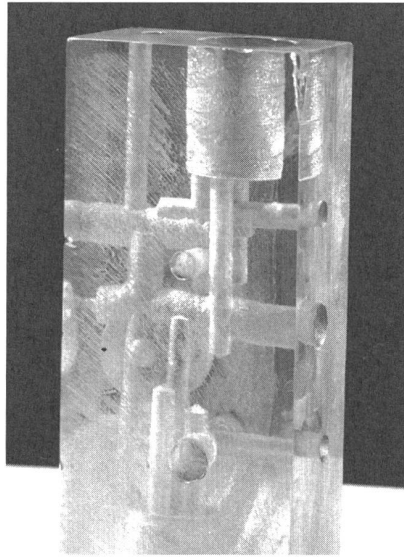
To speak about conceptual transparency today means to discuss problems that do not belong exclusively to architects who consciously work within this paradigm. The location of this idea within the domain of organization is most apparent in the work of Rem Koolhaas, who consistently derives his trajectory from a mediation on the interiority of architecture rather than from contemporary philosophy or cultural theory.<sup>15</sup> Whether Koolhaas' envelopes are considered conceptually transparent is not relevant to the present discussion; What is of some importance is whether his organization strategies embody such a notion.

*Abbildungen (vlnr): Model of the Jussieu Library: S,M,L,XL, Rem Koolhaas, 010 Publishers, pp.1313*

*Axonometric of the Jussieu Library: OMA/Rem Koolhaas, El Croquis 79, pp.125*

*15 For example, while the different camps are arguing if transparency should bear the quality of revealing what's beyond or the quality of simultaneous reading., in Bigness Koolhaas argues that the relationship between the interior and exterior is unimportant, since the core's so far away from the facade. In other words, Colin Rowe liberates the facade from the programmatic content by valorizing the qualities of ambiguity in composition, Rem Koolhaas liberates the facade from the programmatic content by proclaiming their relationship to each other superfluous. Rowe says that separating the physical with the conceptual is better, Koolhaas says that it doesn't matter.*





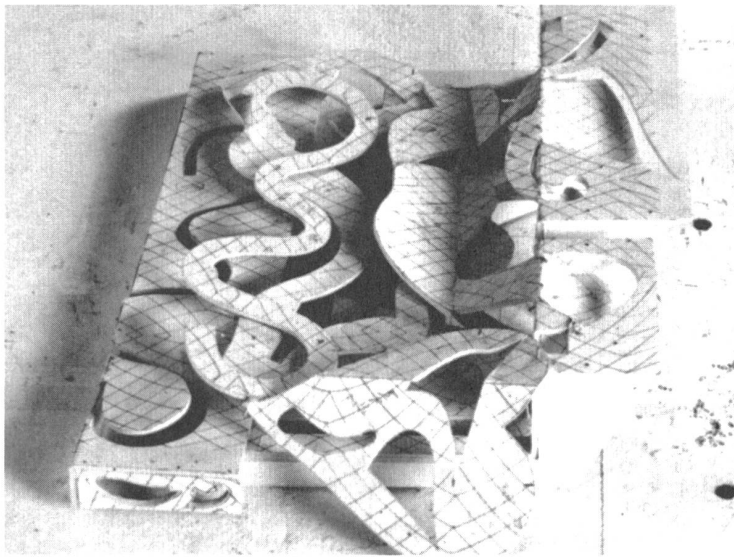
16 This second part of *Transparency*, lesser known but important for the architectural movement that it anticipates, deals primarily with surface configurations with emphasis given on facade manipulation by juxtaposing of modern and Renaissance examples. Published in *Perspecta: The Yale Architecture Journal* No. 13/14, Yale University School of Art and Architecture, New Haven, Connecticut. 1971.

17 Note the similar strategy deployed in the planning of Melun Sénart, where the first implementation is to delineate void bands in which building will not be permitted. See Rem Koolhaas, *S,M,L,XL*, 010 Publishers, Rotterdam 1995, pp. 603.

This tendency is indicative in the organization of Koolhaas' French National Library project. Interpreting the book stacks as a densified program, the five separate and autonomous institutions are defined as absences of the built, voids dug out of the mass of information - a reversed language of program that dictates the internal organization. Its spatial diagram recalls Carl Andre's *Negative Sculpture* of 1958 - a rectangular block of acrylic into which perpendicular cylindrical channels of varying diameters have been drilled. By making the drill holes visible by the matter that surrounds them, Andre demonstrates how empty space could become form. In the Library, the voids are formed as residual spaces after the technical requirements are constructed; each one endowing a technological logic of its own. Functionally, their spatialities are independently flexible to be explored according to their inherent logic.

In their lesser known sequel *Transparency Part 2*,<sup>16</sup> Rowe and Slutzky undertake the taxonomy of figure and ground to further solidify their abstracted reading of transparency; transforming their agenda from the critique of the Bauhaus to their more definitive interest of Gestalt studies in visual perception. A painterly concept that is intrinsically architectural, the issue of figure/ground generally categorized architecture as object and context as ground. While Louis Kahn has established the taxonomy of servant and served spaces, by reversing the figure / ground relationship, Koolhaas reversed their normal spatial allegiances. Taking the void as figure, this model presents a realigning of servant and served spaces.<sup>17</sup>

The conceptual manipulation of figure / ground permits Koolhaas to expand the planimetric freedom of the Le Corbusier's *Dom-ino* (arguably the last spatial model that effectively engenders the issue of use) into a sectional freedom and increases the programmatic possibilities and combinations within the Library. Where as Le Corbusier multiplied the possibilities for functional events between the floors, Koolhaas multiplies the probable occurrences between the walls. While Le Corbusier revolutionizes the horizontal architectural plane by arguing that it supports only one moment of the contiguous space that passed through it. Koolhaas revolu-



tionizes the vertical architectural plane by arguing that the modern contiguous space also travels vertically. This almost pictorial spatial model accommodates complex relationships, and further relates the homogeneously general spaces of the book stacks, to the heterogeneously particular spaces of the institutions. All together, the National Library expands the notion of organizational transparency to engage the opposition between formal invention and planning innovation in the context of contemporary episteme.

Relative to the functional implications of Koolhaas' spatial model, Vidler's inference that its "blurring of limits" is a result of the facades' lack of hierarchy, seems optimistic. Conversely, Rowe and Slutzky's implication of perceptions that are neither opaque nor literally transparent - where figure and ground are blurred, ineluctably insinuates parallels to the blurring of uses in architecture.

A second library project by Koolhaas in Jussieu further explores the opportunities and subsequent relevancy of the figure / ground model. To reassert Jussieu's density, Koolhaas folds its surfaces to form a "stacking" of platforms within a unified structure formed by a ramping system used to connect the isolated floor plates of the Dom-ino into a 1.5 km long continuous concourse; completing the network with a minimal enclosure. Again, conceptual transparency is found not in its skin but in its organization. If Rowe's notion of transparency is perceived "when one plane is seen at no greater distance behind another and lying in the same visual direction as the first,"<sup>18</sup> reading the successive plans of Jussieu under the precepts of figure/ground provides such a pictorial structure that relates all programmatic elements. As in the suppression of the figure/ground in Frank Stella's works,<sup>19</sup> Jussieu trespasses the clear distinctions of the National Library, and proposes a space where the object and field are blurred. While the planimetric readings of Frank Lloyd Wright's Guggenheim Museum - a key antecedent to Jussieu, spin outward like a Duchampian roto-relief, Jussieu folds, protrudes, recesses, and unfolds like an oscillating Stella relief. Consequently, cutting and folding of the Dom-ino's sim-

*Abbildungen* (vlnr): *Negative Sculpture* 1958: Carl Andre, *Sculptor* 1991, *Oktagon*, pp.67

*Study Model*: Frank Stella, 1980-1987, *Museum of Modern Art*

<sup>18</sup> See Colin Rowe and Robert Slutzky, *Transparency: Literal and Phenomenal ... Part 2*, pp.288

<sup>19</sup> Similar to the plans of Jussieu, the reliefs of Frank Stella's *Wave Series*, though not strictly frontal, prioritizes a predominant direction of comprehension.

20 See Ignasi de Solà-Morales, *Diferencias Topografía de la Arquitectura Contemporánea*, Gustavo Gili, Barcelona. 1995 p.23

ply stacked floors, allow sections of the distorted concrete planes to be manipulated to touch those above and below; permitting the visitor to follow the public circuit in a continuously flowing series of motions.

Transparency, as Ignasi de Solas Morales suggests, should be progressing towards an idea oriented more towards the indefinite - the expansion and absence of limits, than towards definitive figurative proposals.<sup>20</sup> Unlike the horizontal amplification of Frederick Kiesler's endless spiral, the Jussieu Library shatters the ideal horizon line of Dom-ino and folds the fragments back into the space a web of partial horizons. Unlike the National Library, Jussieu is characterized by complex incorporations and becomings rather than by conflicts and contradictions. Strategically ingenious as it may be, the National Library is at most a reversal of figure and ground; whereas in Jussieu the figure becomes the ground and vice versa. Two fundamentally different tactics - one assumes a switch in roles in order to dissimulate, the other assumes an assimilation of one another. While the National Library provides a new understanding of figure/ground in relation to Rowe and Slutzky's analysis between the reality of deep space and the implication of shallow space. Jussieu helps to clarify alternative interpretations through the continuous fluctuations generated by transforming the Dom-ino's differentiated planes into a topos of happenings. By releasing that which is repressed in the 'free plan' to the non extrudable 'free section, Koolhaas mobilizes space from a plan diagram for expansion into a sectional diagram for interactions and events.

Along with the dispositions undermined in the new trajectories of critical theory, these two conceptually based organizational models of the National and Jussieu Libraries expand the notion of transparency from a formalist apparatus to a significant implement of production; and foresee new conceptualizations that straddle the line between the literal and the phenomenal. For more than ever before, the notion of transparency as an instrumentality continues to inform emergent possibilities in architecture.