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A Warp of Ideas: Hejduk Translating Mondrian

This paper examines John Hejduk’s (1929–2000) Diamond Projects (1962–67) from the point of view of their translation of certain painterly forms and ideas—those relayed through or rendered in the diamond-shaped canvases of Piet Mondrian—into architectural devices and composition strategies. The paper tracks Hejduk’s efforts to mimic and give architectural form to the specific effects he discerns in the diamond canvases of Mondrian. Put differently, and to use his own words, the paper undertakes an analysis of Hejduk’s experiments in translating neo-plasticist space into architecture.

Four interconnected themes demarcate the explorations undertaken by Hejduk in the Diamond Projects: peripheral tensions, boundless field extensions, voided centres, and spatial warps realised from right angle relationships. The paper gives emphasis to the latter theme which, it is suggested, enables and leads Hejduk to postulate a third architectural idea of space alongside renaissance or perspectival space and cubist space. In this way, the paper is concerned with a double translation, that of Hejduk’s attempt to translate certain of Mondrian’s painterly devices into the realm of architecture, and the potential translation or transmutation of architectural ideas of space that results from a confrontation with and mutual imbrication in neo-plasticism.

Published and unpublished drawings by Hejduk held at the Canadian Centre for Architecture, Montréal, contemporaneous writings, and interviews from the 1980s provide primary source material for the research. The paper contributes to debates around the relationships of painting and architecture, adds to critical histories of architectural space and composition at a specific moment in modern architecture’s trajectory, and makes a modest contribution to scholarship on the work of John Hejduk. Future lines of investigation are proposed as a form of provisional conclusion.
Plastic Points of View

“Le Corbusier is well aware of the Cubist and the Neo-Plasticist points of view... [and] the dialectic has continued with painstaking exercises and fulfilment upon the canvases of Piet Mondrian.”

John Hejduk, Out of Time and Into Space

In August 1965, at the time of Le Corbusier’s death, John Hejduk is in the middle of his six-year investigation into the Diamond Projects (1962–67). A special issue of L’Architecture d’aujourd’hui appears some months later as an homage to Le Corbusier’s life and work and includes the first publication of Hejduk’s Out of Time and Into Space.¹ The essay provides an analysis of Le Corbusier’s Carpenter Center for the Visual Arts (1959–63) undertaken in the context of a discussion of the differences between two plastic points of view, the cubist and the neo-plasticist. For Hejduk, painting and architecture generally “are an embodiment of specific plastic points of view.”² These plastic points of view also correspond for Hejduk to ideas of architectural-painterly space and thus the essay is also in part about the potential or limits each implies for the history, trajectory, and future of architectural space as a problem for the practicing architect and an interpretive category for the critic-historian. In Out of Time and Into Space, the cubist viewpoint in painting is rendered in prototypical manner in Juan Gris’ Guitar, Glasses and Bottle of 1914, the neo-plasticist in Mondrian’s diamond-shaped paintings, with singular reference to the latter’s late unfinished work, Victory Boogie-Woogie (1942–43).³

What characteristics are identified by Hejduk as differentiating cubist and neo-plasticist works? Which are the specific devices and effects deployed by Mondrian that Hedjuk seeks to translate into architecture by means of the diamond series experiments?

From a close reading of Hejduk’s writings, four formal-spatial characteristics or composition effects in the diamond canvases of Mondrian, and thus neo-plasticism, are identified. The characteristics are peripheral tensions, boundless field extensions, voided centres, and spatial warps realised from right angle relationships. These effects are contrasted by Hejduk with those at work in cubist paintings and thus provide a framework for him to differentiate a cubist space idea from a neo-plasticist idea of space. According to Hejduk, architectural manifestations of the two view

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points are realized – though never in a pure state –, in Le Corbusier’s Carpenter Center and Villa Stein at Garches (1926-28) respectively.

When rotated forty-five degrees relative to a system of orthogonal relationships, Hejduk identifies the perimeter of Mondrian’s diamond shaped canvases as the site of the first of several specific ambiguities, that of peripheral tensions. This decision to rotate the canvas activates the outside points and edges of the composition in a manner clearly different from the tendency of the cubist canvas to promote directional vectors and decrease activity towards the perimeter. Hejduk uses paintings of Gris to illustrate this state, one given architectural expression for example by an agitation or fracturing of light. This condition is found in the Carpenter Center’s alternate use of brise soleil and vertical window bars in the studio floors.

The neo-plasticist desire for boundless extensions is different from the cubist vision where, according to Hejduk, “the field comes first”. In other words, in Mondrian’s Composition I with Blue and Yellow for example, unconstrained, infinite extensions of the vertical and horizontal bands beyond the canvas are implied. This is different from the contained, finite, interlocking field in Gris’ Guitar, Glasses and Bottles. In part, this trait also allows Hejduk to emphatically get away from a Gestaltist reading of figure-ground fluctuations rendered in cubist works.

A third characteristic of neo-plasticism Hejduk claims to locate in Mondrian’s diamond canvases is the absence of an active centre. The centre is voided, states Hejduk, a consequence of perimeter agitations and an effect of the implied infinite field extensions. It is a state that results in Mondrian’s Fox Trot A (1930) for example, and the never quite regular geometric figures that exist except when they are imagined to be completed outside of the canvas. The cubist work, by contrast, energises the centre. In Gris’s Violin and Newspaper, for example, Hejduk sees a strong cross-axial structure, one in which “the shapes and figures congesting the inner field energize a high concentration of action towards the intersecting axis, compressing the central space.” In Mondrian’s diamond-shaped canvases, by contrast, there is a dissipation of the centre, a voiding which at the same time contributes to charging the periphery.

The fourth characteristic Hejduk sees in Mondrian’s neo-plasticist vision relates to an overall idea of volume and space. A neo-plasticist work according to Hejduk specifically creates a warping of

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7 Carmean, Mondrian, 94 (Bois, et al, Piet Mondrian, 220-21).
8 Hejduk does not that I’m aware name specific diamond canvases by Mondrian other than a reference to Mondrian’s Victory Boogie Woogie which is paired with Le Corbusier’s Villa at Garches. See “Out of Time,” 4.
10 See Carmean’s conjectural completion of Diagonal Composition (1921) as a square canvas. Carmean, Mondrian, 29-30, 93 (See Bois, et al, Piet Mondrian, 203 for a colour reproduction of the canvas).
space solely by right-angled relationships. It is distinguished from cubist flat space resulting from figure-ground fluctuations in a contained field. As a way to understand what is at stake for Hejduk, consider that in Mondrian’s rotation of the canvas, a form of visual and plastic activity is put into motion, one whose impact has an implied horizontal direction different from and in tension with vertical vectors parallel to the wall limits of the work. The ambiguities thus achieved have both real frontal and ideal implied horizontal effects. By implication, Mondrian’s Composition I, for example, sets up visual tensions that lead it to twist or torque off the wall in order to release or generate lines of force in multiple horizontal directions relative to vertical ones following the plane of the wall. This fourth characteristic is discussed by Hejduk when he acknowledges the “remarkable study” contained in Rowe and Slutzky’s Transparency article. Hejduk positions his own interest explicitly on the side of the spatial or non-visual discoveries of the modern painters to differentiate it while at the same time borrowing key ideas and perhaps a diagram strategy from the Rowe and Slutzky article as I will discuss in the final part of this paper. For a summary of the above discussion, Table 1 sets out in synthetic manner the four characteristics differentiating cubist from a neo-plasticist view points.

<table>
<thead>
<tr>
<th>Cubist</th>
<th>Neo-Plasticist</th>
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<tbody>
<tr>
<td>• Directional vectors, or a decrease of activity towards the periphery</td>
<td>• Agitated periphery or peripheric tensions due to increased activity</td>
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<tr>
<td>• Field, or gridding’s with interlocking planar figures</td>
<td>• Boundless extensions beyond the canvas</td>
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<tr>
<td>• Compressed centre resulting from a strong centralisation of figures</td>
<td>• Voided centre</td>
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<tr>
<td>• Figure-ground ambiguities in a gridded field producing flat space</td>
<td>• Figure-figure combinations producing spatial warps in the form of vertical and horizontal torquing</td>
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Table 1. Characteristics of Two Plastic Points of View

The Diamond Projects

Having tracked composition devices, form effects, and spatial ideas implied or otherwise claimed by Hejduk as inhabiting the neo-plasticist canvases of Mondrian, and their differences from those of the cubists, I now turn to his series of Diamond Projects. In a statement published in 1969, Hejduk succinctly captures the premise and primary motivation for the Diamond Projects experiment: “If the Cubist canvas provided thought to the architects of the twenties, there may be some significance in the diamond canvases of Mondrian for architects of today.” Diamond House A, Diamond House B, and Diamond Museum C are the three developed projects in Hejduk’s Diamond Project series. Drawings and models resulting from the study were exhibited in November 1967 in a gallery show at The Architectural League, New York, along with paintings on the theme of the

13 Hejduk, Three Projects, np.
diamond in painting by Robert Slutzky. The projects have been the object of partial publication, regular allusion and reference in writings of and on Hejduk, but only limited extended consideration. Did Hejduk succeed in translating into architecture the effects of neo-plasticist space discerned in Mondrian’s diamond canvases? In other words, is there evidence that the Diamond Projects succeeded in translating Mondrian’s postcubist viewpoint into architecture? Which are the important differences between the three developed projects, and does one succeed more than another in their deployment or manifestation of Mondrian’s painterly devices? To begin to approach these questions, I will examine the three projects in order.

Diamond House A is a thirteen-column, ten-grid-line, square-bay plan. (fig. 1) Unlike the “Texas” house investigations that preoccupied Hejduk in preceding years, bay counts prove a not useful way to characterize the series, the number of regular four-sided bays being highly limited. In House A, for example, there are four full bays, eight “three-fifths” bays ringing the perimeter, and eight minor “triangular” bays at the points. Column or grid lines are counted both vertically and horizontally. Columns are round, introducing a “centrifugal force and multi-directional whirl” into the plan according to Hejduk.

Grid lines are inscribed in the floor plan as narrow bands, and there is a straight run stair in the second bay from left. Elements (fireplaces, furniture, partitions) are generally abutting the column/beam bands, though not consistently. Certain partitions on the second and third floors are located well off grid. On the second and third levels, full floor-height brise soleil bars provide a continuous...

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15 For a catalogue that documents the seven nine-square or “Texas” house series, see Kenneth Frampton, ed. *John Hejduk: 7 Houses* (New York: The Institute for Architecture and Urban Studies, 1980).

16 Hejduk, *Mask of Medusa*, 73.
agitation of the light, to use Hejduk’s characterization of the effect. The rhythm varies from floor to floor and there is no clear method for placement of the brise soleil with one exception. There is a consistent doubling of bars on the grid-line extension to the perimeter and the glass is pushed out in these instances, including at the top and bottom points, to the outside of the slab. This is most easily seen in model photographs and introduces a direction in the plans to the extent that left-right grids are not treated in the same manner either in the mid-bay positions or at their points.

In Diamond House B, another four-level project, parallel rows of walls replace columns, generally running vertically according to the plans as published (fig. 2). Different from House A, the stairs have shifted: there is a switch-back stair at the bottom and two spiral stairs framing the spine. Right-angled relations inside the diamond plan are constant, until the final floor is reached and curved elements appear. Counting from point to point, this is a twelve-grid line, square-bay plan. Floor scoring continues as in House A: wall-width scores in the regular bay pattern. If House A was an exploration of the formal implications of right-angled conditions within a diamond configuration via columns or walls in shifting right-angled or oblique relationships, then House B tests the potential using walls alone.

As in House A, and revealing a lingering cubist tendency, there is a direction as well as an eccentricity introduced by placement and delineation of walls of different dimensions. Thicker walls are located on top-to-bottom grid lines three and five (counting left to right) establishing a dominant direction in organizing spatial flow and a shifted centre onto grid line four. The perimeter

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17 “Well, the whole idea of the periphery in the Diamonds dealt with the fragmentation of light, you have to understand that. They were like bars. The fracturing of light in an apparently simple program is maddening.” Hejduk, Mask of Medusa, 135.
18 For model photographs see Hejduk, Mask of Medusa, 244-45, and Mark Linder, Nothing Less than Literal: Architecture After Minimalism (Cambridge, Mass.: The MIT Press, 2004), 188.
19 A longer treatment of the Diamond projects will explore specific relations created by curvilinear walls and Hejduk’s research into the architectural problem of ordering colours. On the former, see Hejduk’s remarks in the Three Projects’ text: “a curvilinear surface would have the effect of softening the experience and impact” as compared to the impact of confronting the diagonal perimeter with right-angled relations. Hejduk, Three Projects np.
agitation of light in House A that Hejduk found so troubling twenty years later is not present in House B. There continues a constant floor slab overhang interrupted in this case only by glass blades extended along eight of the grid line extensions, all continuing the top-bottom alignment of the major internal walls, further reinforcing the directionality and thus weakening the potential for neo-plasticist boundless extensions.

Diamond Museum C begins again with a square bay, now in a larger eighteen-grid-line, forty-one round-column configuration. (fig. 3) Like Houses A and B, a greater concentration in the vertical (top-bottom) alignment is palpable in the plans as published as is his desire to void the centre. All three vertical circulation elements – the switchback ramp and two switchback stairs – as well as the cluster of biomorphic shaped walls are all aligned in a top-bottom arrangement. As in House A and House B, the top-bottom bias is reinforced by the orientation of perimeter brise soleil blade walls. The brise soleil blades are on a two/thirds grid-line rhythm that continues without interruption around the full diamond perimeter, aligning with every other grid line. The rows of display cases in Diamond Museum C are all on a horizontal left-right alignment and in this could be interpreted as explicitly following the general disposition of Mondrian’s *Victory Boogie Woogie*. In its unfinished final state at Mondrian’s unexpected death, *Victory* has eight horizontal rows of small colour swatch tapes and the display cases in Museum C roughly align with these. Other shared features include the openness of all four points and the use of relatively large areas of neutral colour (open field) on the top/bottom spine. Major walls are more or less on a pinwheel configuration. Scoring of the plan on the column-grid follows a left-right pattern. A second level of floor scoring at right angles to this divides each bay into three vertical rectangles. This could be interpreted as introducing a cubistic gesture (directional) in a neo-plasticist (non-direction, square grid) realm. Plan tensions are introduced between a bias to the vertical against uniform extensive or explosive forces, not at the points but out to the edges of the diamond.

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From the above too brief survey - and to return to the opening questions - there is evidence that the Diamond Projects partially succeeded in translating aspects of Mondrian’s postcubist viewpoint into architecture. All three Projects contain an agitated periphery. Tensions in the published model of House B, for example, palpably convey this state. Activated, open corners and boundless extensions beyond the envelope in the case of the projects, as different from cubist griddings and interlocking planar figures, can be found easily in House A and B, but less easily in Museum C. In Museum C, and as Hejduk acknowledges in the late interviews, the curvilinear elements may belong to a different realm and in any case do not “fit” with the Mondrianesque approach and seem to return to more cubist-like traits (directional emphasis as opposed to an overall field). Perhaps, like Mondrian who is alleged to have exceeded the logic of *Victory Boogie Woogie* in the last working over, and as Hejduk himself reflects some years later, he pushed it too far. All three of the diamonds can be claimed to void the centre as already discussed above in the individual descriptions. Finally, a condition different from the figure-ground ambiguities of the cubist rendering of flat space is manifested in figure-figure states in which there is no discernable ground and even the implied depth of planar overlap is avoided. Rather, as was suggested in relation to House A and B in particular, and as can be seen in considering again the peripheral states of Museum C, there is evidence of a spatial torqueing. A spatial warp in this context can be interpreted as a form of torqueing, corresponding to that in Mondrian’s *Composition I* discussed above, a conception of space clearly differentiated from a cubist tradition. In the final section, I will discuss Hejduk’s attempt to diagram this condition.

**Diagramming a History of Space in Architecture**

Hejduk ends his *Three Projects* text with a statement that deserves further elaboration and is useful for contextualising the possible reach of the diamond projects: “The above is a somewhat compressed discussion for the admission of the diamond configuration into the family of architectural space generators.” As implied in his published writing of the period, and to turn to the second form of potential translation or transmutation - that of architectural ideas of space resulting from a confrontation with and mutual imbrication of neo-plasticism and architectural composition - what was at stake for Hejduk in his compressed history architectural space? What was the context in which he framed his future ‘space generator’? What if anything has been achieved in relation to the transference or translation of the new idea of space through the diamond projects?

In order to begin to approach these questions, let us examine two diagrams that tried at the time to capture, contextualise, and treat the architectural effects of a new world of space. For the first, consider Rowe and Slutzky’s diagramme of the post-cubist space at work in Le Corbusier’s project for the League of Nations (fig. 4).

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21 “Wall: Especially the Museum Diamond starts to have a frantic quality. Hejduk: That’s the last I could push that, then I dropped it.” Hejduk, *Mask of Medusa*, 135.
Different from projects that prohibit ambiguity, and according to Rowe and Slutzky’s analysis, the League of Nations encourages and is a catalyst for ambiguity. The space produced is characterised by a layer-like structure, a logic of spatial stratifications, and their diagram tries to recount the consequences.

Specific equivocal sensations are announced by Rowe and Slutzky when attempting to differentiate two kinds of modernist sensibilities. The two are given exemplary definition by the Villa at Garches and Gropius's Bauhaus. The League of Nations provides a final instance of what they name a postcubist tendency. The kind of space which marks this tradition shares the qualities Hejduk later identifies in the diamond projects. Space is “contained, embanked, tunnelled, sluiced … constructed, substantial, and articulate.”

In *Three Projects*, and to turn to the second diagram, Hejduk proposed to describe different architectural space conditions, a short hand he claims illustrate three ideas of space. (fig. 5) These are (a) renaissance (the past: perspectival), (b) cubist (the present: flat, gridded, two-dimensional), and (c) neo-plasticist or postcubist (the future; stratified, in flux) ideas of architectural space. As already discussed, these were first articulated in his *Out of Time* essay, though not illustrated except by reference to various paintings by Gris, Léger, Mondrian, and Le Corbusier’s Carpenter Center and Villa at Garches.

What are the possible sources for Hejduk’s diagram? Did Hejduk develop his 1969 diagram of the history of space in architecture with the 1963 Rowe and Slutzky diagram of postcubist space at work in Le Corbusier’s League of Nations in mind? Putting aside questions of provenance and of influence, an examination of the two reveals a number of commonalities.

Both diagrams assume the idea of lateral extension. In the case of the Diamond Projects, future space conditions result from receding planes as one approaches the project on the tip and when one is inside, especially in the case of House A and when on the edges of Museum C. This is the wandering line/subject of his diagram (fig. 5). In the case of the League of Nations, it results from a system of ground and volume striations that comes in play as one moves through the site. In both, intimations of depth “are consistently retracted” to use Rowe and Slutzky’s term. This is the case in the diamond’s voiding of the centre – everything is pushed out to the perimeter – as much as for the League of Nations by means of repeated cuts and lateral displacements as one advances toward the General Assembly.

In both, there is a moment of extreme compression and agitation, perhaps the realisation of what Hejduk called the moment of hypotenuse. For the diamonds, and looking closely Hejduk’s diagram, that moment occurs when the observer is disposed frontally to the Diamonds, the two faces of the volume receding. It also happens while in motion, once inside, through the network of right angled relationships. In Le Corbusier’s League of Nations, according to Rowe and Slutzky it happens in what

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they call the “rift of space” in between the Assembly Hall and the office bar. This is a space literally constructed, putting the visitor into a spinning or torquing motion that repeats the sideways motions that have been battled along the way, with penetration of the General Assembly only to be imagined at best if not properly achieved.

While additional work is needed, the two diagrams when read together to suggest an analytic and interpretive strategy for postcubist conditions, and in turn support Hejduk’s aim of expanding the “architectural family of space generators.”

Next Lines of Inquiry

The above has been a brief consideration of John Hejduk’s investigations into the architectural potential of Mondrian’s diamond-shaped canvases and their translation in the Diamond Projects. As a form of provisional conclusion, two future lines of research could be followed.

A first might focus on the larger context, expanding the study to include different sensibilities and other critical-historical models at that moment in modern architecture’s trajectory. Different from the cubist | postcubist dialectic of Hejduk, Vincent Scully (b. 1920) in his Modern Architecture (1961), for example, proposed the dialectic of what he calls ‘American precisionism’ against and differentiated from European romantic-naturalism. The two species for Scully are illustrated by the portrait paintings of Thomas Eakins (1844-1916) and Gustave Courbet (1819–77) respectively, with architectural manifestations found in the Sarasota High School (1956–59) by Paul Rudolph (1918–97) and Le Corbusier’s High Court Building Chandigarh (1952–56). Continuing this line of inquiry, one would logically interrogate Henry-Russell Hitchcock’s Painting Toward Architecture of 1948, oddly not referred to by Rowe and Slutzky in the 1963 essay nor by Scully who otherwise widely cites Hitchcock. And one would be obliged to take on Sigfried Giedion’s Space, Time and Architecture (1941). All feel obliged to refer to it, Scully explicitly argues against it claiming continuity and fragmentation better capture the moment and buildings under examination and a close reading along narrow lines might yield new insights into the underlying ideas. It might also prove productive, finally, to include Alfred Barr’s (1902-82) Cubism and Abstract Art of 1936 which was a constant reference to historians and architects of the time. How does each of these articulate the relationships of painting and architecture? What do they add to the reading of Hejduk at the end of this lineage? Is it a lineage?

A second line of inquiry, in the opposite chronological direction, would accompany Hejduk in his work after 1969 and track allusions or specific references to painting accompanying his

post-diamonds projects. A survey would move from his obsession with the *Madame d’Haussonville* of Ingres (1780–1867) while working on the Wall Houses in the 1970s; to Edward Hopper (1882–1967) and Botticelli in the 1980s, each displaying for Hejduk a different attitude to surface and the problem of sensuality and finding their echo in the Berlin Masque; to Thomas Eakins’ rendering of a sensibility which Hejduk claims combines an American ‘essentialism’ – perhaps close to Scully’s precisionism – and a European ‘dread’ all while Hejduk is working on the *New England House*; and at the end, in the 1990s, to the fifteenth century Italian primitives of whom Hejduk makes special reference to Sassetta while developing *Cathedral* and *Enclosures*.

Both lines of inquiry will be saved for a future study.