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Design translation is an increasingly notable phenomenon, both in academia and in the practice of architecture. Many architects take an existing artwork as a departure point to formulate architectural designs. This is an issue of both transformation and translation. For instance, influenced by the composition of a painting, the architect designs a space with visual similarities to the original painting. Further, ideas are translated into designs of spaces that are visually dissimilar to the original work of art. In many cases of design translation, unconventional designs are the goal. The original artwork becomes the generator of progressive forms of architecture. Design translation seems to be an alternative strategy for form-finding. However, design translation can be more than just a design strategy because its assumptions and implications tackle the core relationship between form and meaning in architecture and its design processes.

Assumptions

Design translation is based on four major assumptions: architecture has symbolic meaning, there is a constructive way of understanding both the original work and the new work, the design languages in both the new and the old work make sense in their autonomous systems, and the new work is a motivated partial restatement of the original work.¹

Architectural space has symbolic meaning over and above functional meaning. Architecture negotiates the different agendas of its symbolic and practical aspects. A building is not merely a shelter that protects, or a container that functions, but a place that has significance, meaning, and symbolic content, and makes references to a range of precedents. As Nelson Goodman argues, only when a building signifies does it become a work of art.²

Like other works of art, the design of architectural space can be understood as a process of construction. In “design translation,”

one must understand how an original work was constructed and how that way of making can influence the new work. Therefore, construction, rather than mere recognition, connects works through generative processes.

In addition, design translation does not imply that the meaning of a work resides in its ability to refer to another work. Each work should be considered in its own right. The tension among works in different media must be studied not from the point of view of reference, but rather from the point of view of design language.

Finally, in design translation, the new work is specifically motivated by, and a partial restatement of, the original work. Such restatement not only depends on what is explicitly stated in the original work but also, and more importantly, on what the architect looks for and perceives. The latter leads the architect to approach an original work with a previously established motive.

Questions

The assumptions of design translation prompt questions regarding the nature of form and meaning in architectural design. The process of design translation makes architects aware of the following four questions and their philosophical implications. The questions are: how does architecture “mean”? How is meaning constructed in architectural space? How are spatial meanings received? How are intentions embedded in architectural space?

How Does Architecture Mean?

The assumption that architecture has meaning leads to the question of how architecture “means.” How architecture “means” is a concept from the article “How Buildings Mean,” in which Nelson Goodman discusses how architecture gains meaning. Goodman proposes three concepts as elementary varieties of symbolization in art: denotation (representation), exemplification, and expression. According to Goodman, denotation includes “any labeling, any application of a symbol of any kind to an object, event, or other instance of it.”³ Architecture is essentially an abstract art, like modern abstract painting; it does not contrive meaning by literally referencing other objects. Instead, architecture “means” by referencing properties. As Goodman writes, “reference by a building to properties possessed either literally or metaphorically is exemplification, but

exemplification of metaphorically possessed properties is what we more commonly call ‘expression.’”⁴

If architectural meaning is more relevant to exemplification and expression than to denotation, restatement across media involves two kinds of meanings: commonly exemplified qualities and commonly expressed concepts and feelings. Qualities of the original work can be exemplified in varying degrees in the restatement. What is exemplified and then restated could be literally shared properties. For example, a composition in painting may be restated as a composition in architecture – a straightforward connection from the visual to the visual.⁵ Another case might involve a certain structure embedded in a non-visual art, which may be registered visually and spatially in architecture. Musical rhythm (measure and punctuation of time) may be restated in architecture as the occurrence of spatial changes or suggested movement changes (measure and punctuation of space). However, this is a less straightforward connection because it is a transition from non-visual to visual art.

“Architecture is essentially an abstract art, like modern abstract painting; it does not contrive meaning by literally referencing other objects.”

An even more complex case occurs when what is literally exemplified is more qualitatively complex. For example, one may read Juan Gris’ painting *Still Life* as an exemplification of frontally-aligned objects in a shallow, abstract space and then embed his or her own architecture with this quality. This quality is not achieved through measurement, nor can the composition of the

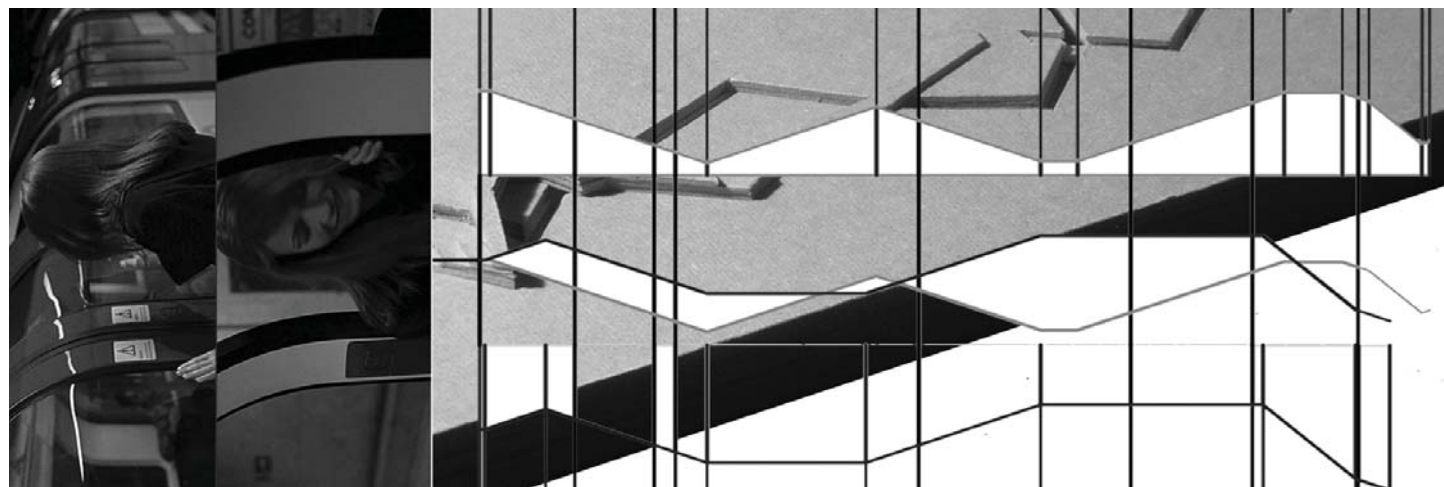
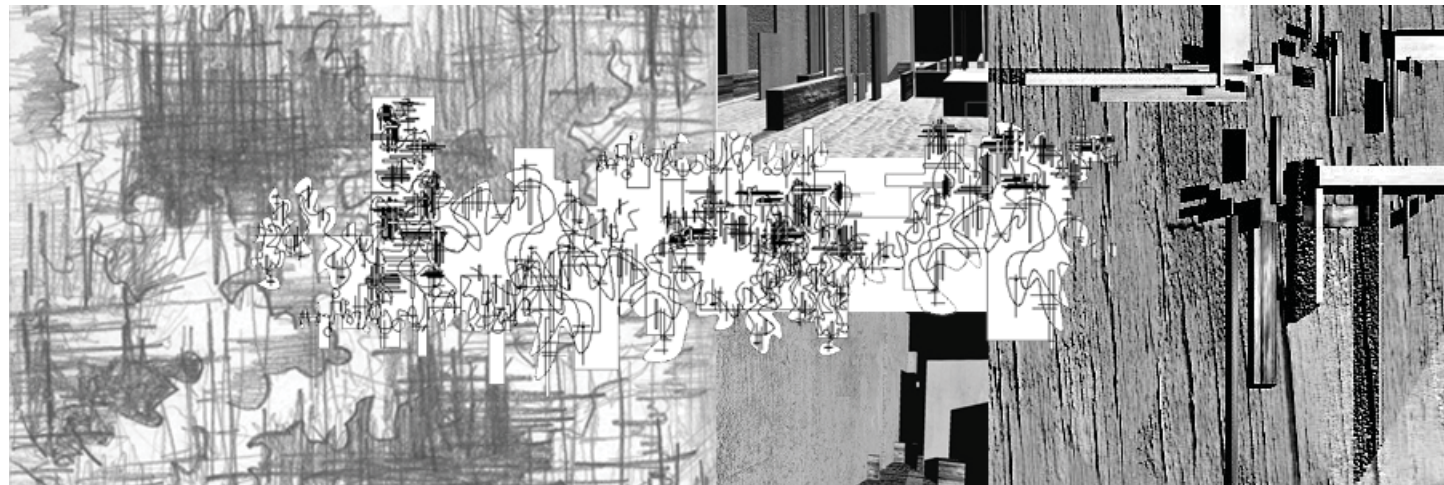
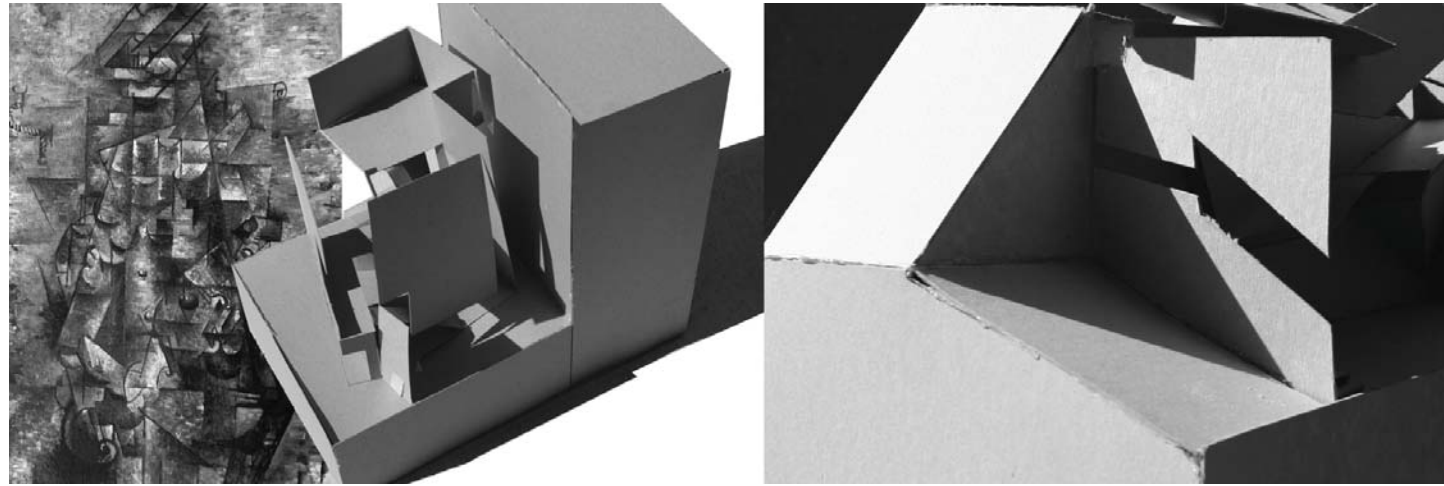


Image 1_Experiments from the author's studio. Top: Space emerged from a painting. Center: Space emerged from music. Bottom: Space translated from the narrative of the film: Slide Doors.

painting be directly borrowed. The architect must find a unique language rooted in the medium of architecture to exemplify the same quality. Further, one may abstract the qualities in Gris' Still Life, as Colin Rowe and Robert Slutzky did, by formulating the concept of phenomenal transparency. This is the moment when exemplification moves towards expression: it involves abstraction of thought.

Commonly expressed concepts and feelings, the two kinds of symbolic meaning expressed in art, are also important to consider in restatements across media. The distinction between concepts and feelings is that concepts are logical and feelings are not. A concept is an abstract form of varied appearances of multiple situations while a feeling relates to one situation. Further, an "actual feeling" differs from the understanding of feeling. While an "actual feeling" is subjective, the understanding of feeling is objective. Expressing concepts and feelings involves a mechanism in which specific exemplification leads to specific expression. For example, a study of the relationship between Sergei Eisenstein's cinematic form and its expression may lead to a design of a space that embeds both form and expression. Since restatement is a media-specific construction of meaning, we must understand not only the specific medium that involves meaning but also the mechanism that relates exemplification to expression in order to allow the new work to express concepts or feelings (Image 01).

How is Meaning Constructed in Architectural Space?

The second assumption – that design translation is a way of understanding both the original work and the new work – leads to the issue of spatial construction. The medium of physical space differentiates architecture from music,

painting, dance, and film. Meaning is medium specific.⁶ Just as intriguing is how expressions of concepts and feelings are established and built into spatial properties;⁷ architects employ spatial properties to express thoughts beyond these properties.

If we assume concepts and feelings can be expressed through spatial properties, we are in fact assuming an objectivity of the relationship between expression and spatial properties. What can be objectified in the relationship between thoughts and physical properties? They seem to be linked with the idea of structure. According to Susanne K. Langer, "the bridge that connects all the various meanings of form—from geometric form to the form of ritual or etiquette—is the notion of structure."⁸ Structure is a set of logical relationships, like concepts, which may share a common form with physical construction. That is, concepts and construction may exemplify the same logic. Thus, the form of concepts and the form of construction can be related under the notion of Isomorphism. For example, Peter Eisenman's "Romeo and Juliet" Project for the Venice Biennale in 1985 expresses the concept of love in three structural relationships: division, union, and the dialectical relationship between the two lovers.

Although these relationships are drawn from the original Romeo and Juliet narrative, they are not embedded in the form of the play. They are thoughts that are highlighted in the narrative and embed strong physical connotations of structure. However, the concept of love differs from the feeling of love. That one understands division, union, and dialectical relationships as logical relationships of love does not necessarily mean that one is in love. The concepts of love represent distanced understanding. The feelings of love, on the other hand, are internalized states.⁹



Image 02_Daniel Libeskind's Jewish Museum Berlin.

How are Spatial Meanings Received?

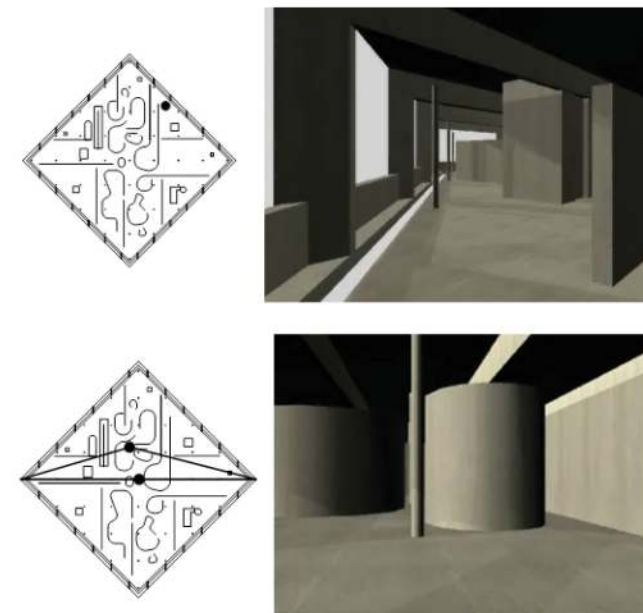
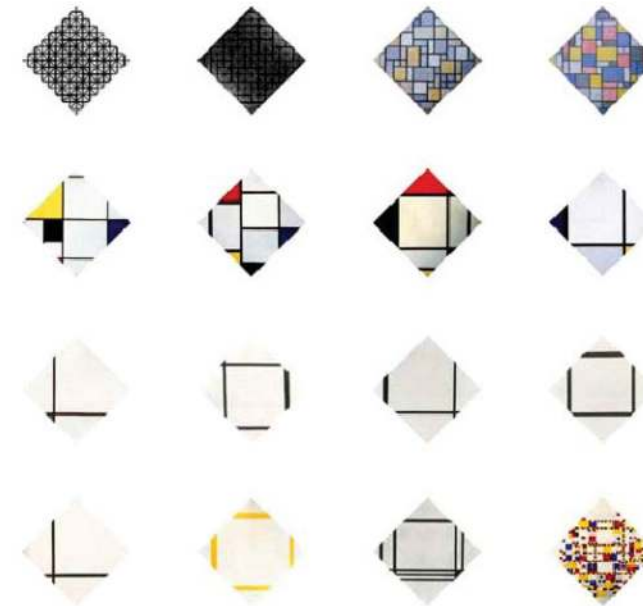
The third assumption – that the autonomous system of architectural space makes sense within its own medium – raises the question “How does one perceive meaning embedded in architecture?” There are two ways in which meaning in space is conveyed to the viewer: an externalized view and an internalized view. The former focuses on the logical relationships among the spatial elements. The viewer’s body is outside the space. The latter focuses on the experiential aspects of space. The viewer’s body is inside the space.

From an externalized view, the structure of space is foregrounded. Spatial structure corresponds to relevant concepts, as well as abstract and intellectual principles embedded in the construction of a work. For example, the concept of “wall corner condition” and certain rules derived from this concept may be perceived from an analysis of the main building of Ludwig Mies van der Rohe’s Barcelona Pavilion.¹⁰ By recognizing specific structures visually, the viewer understands the logical form of the space.

However, what is examined through the above example are two-dimensional representations of space. What is required for the spatial structures to be understood experientially? Architectural space is occupied by bodies

so its meaning is contingent upon what is inferred and experienced through such occupancy. Spatial challenges to the body are registered on various levels such as elementary conditions and spatial sequences. Elementary conditions are immediate spatial challenges to the body. They involve senses such as sight, hearing, touch, and even smell and taste. Direct stimulation of the five senses arouses feelings in viewers. For example, the Holocaust Hall of the Jewish Museum in Berlin, designed by Daniel Libeskind, is a room of average size. Its extensive height, tapered-in walls, and a single light source from the top traps the viewer’s body, evoking a feeling of claustrophobia. Furthermore, when immediate spatial challenges to the body are strung in a sequence, a structure of elementary conditions is unavoidably formed. Once an understanding of such structure is established, viewers’ feelings of claustrophobia may intensify. For viewers who pass through the Holocaust Hall and find themselves at the garden, the claustrophobic experience has been exhausted. Facing the garden with its tilted columns, the viewer may be still adjusting to a new horizon of views. Understanding the past and the present, she is relieved by a feeling of survival (Image 02). The embodied experience within the space eventually leads to a realization of a spatial metaphor.

Image 03_John Hejduk's Diamond Museum in relation to Piet Mondrian's Diamond Series.



How are Intentions Embedded in Architectural Space?

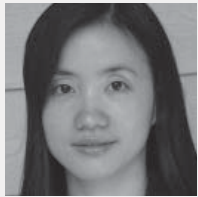
An architect has to formulate and embed an intention in her designs in order to make working across media purposeful. This task becomes the actual design task that synthesizes the previous three questions: how does architecture “mean”? How is meaning constructed in architectural space? How are spatial meanings received? For example, flatness was the intention of John Hejduk’s Diamond series. Hejduk always stressed the appearance of drawing or space, particularly in the construction of flatness. He made interesting observations on how a 45-degree rotation of a diamond shape in an oblique projection drawing can result in the flat appearance of the diamond shape. Based on this observation, he eliminated the depiction of the third dimension in the drawings of the Diamond series; these drawings became a clear statement of the intention of flatness for his architecture.

The diamond configuration, as imagined by Hejduk, also involves a perspectival effect whereby the two sides of a diamond appear to flatten out onto the hypotenuse when the viewer approaches the building from the exterior, or looks at the building from the inside. Flatness as a visual effect gives way to flatness as an essential concept. However, such flatness is not visually overt in the real-scale diamond space. That is because one cannot perceive the space of the whole diamond shape from any angle within the space. The space is only activated for an intimate communication with the one who moves through the different spaces in the building. The viewer’s body mediates the space. When moving along the periphery of the diamond space, the viewer recognizes the diamond shape of the space through its rotated fin elements (Image 03). With this diamond shape in mind, the viewer realizes the angle sustained between herself

and the two side corners is gradually flattened out when moving from one corner of the diamond across to its opposite. Hejduk's Diamond series demonstrates a comprehensive process of translating a visual appearance to an architectural piece. Architectural space is occupied by bodies.

Conclusion

Examining the implications of design translation, we proceeded through fundamental discussions on architectural space in terms of form and meaning. The construction of meaning in architectural space is not through arbitrary associations. Instead, it is rooted in a system composed of the medium of space and the embodiment of space. Therefore, the partial restating of artworks, insights, or feelings across symbolic systems can function as a trigger for an experimental interrogation of the systems themselves. The tension between works in different symbolic systems makes an architect manipulate her own symbolic system critically. Being conscious about such interrogation ensures design thinking through various processes.



Weiling He, PhD

Weiling He is an associate professor at the College of Architecture in Texas A&M University, Texas, United States. She received her PhD from Georgia Institute of Technology in 2005. Her research field is design theory with particular focuses on translations across different forms of art, metaphors of making, diagramming and visual thinking.

Keynotes

1 The position of this paper aligns with Jorge Silvetti's "criticism from within" elaborated in his article "The Beauty of Shadows."

2 Nelson Goodman, "How Buildings Mean," in *Reconceptions in Philosophy and Other Arts and Sciences* (Indianapolis: Hackett Publishing Company, 1988), 31-48. Goodman points out how the formalists' argument that pure art must be free of all symbolism "rests upon a cramped conception of reference."

3 Nelson Goodman, *Languages of Art* (Indianapolis/Cambridge: Hackett Publishing Company, Inc., 1976), 369.

4 Goodman, *Languages of Art*, 372. To minimize the confusion, as Goodman does, "exemplification" is short for "literal exemplification," and we reserve "expression" for metaphorical cases.

5 This kind of exercise seems common in foundation year design studios. The premise can be transforming a two dimensional painting into a three dimensional space.

6 This is not to say that works in two different mediums cannot share the same meaning. Instead, how meanings are constructed in two different mediums is specific to the nature of the mediums.

7 Other aspects of architecture besides space that can be constructed are color, texture, and icon; however, this paper will deal with its very essence, space.

8 Susanne K. Langer, *An Introduction to Symbolic Logic*, 3rd ed. (New York: Dover Publications, 1953), 24.

9 Eisenman, Peter. *Moving Arrows, Eros and Other Errors : An Architecture of Absence*. London: Architectural Association, 1986.

10 This study by the author focuses on how walls meet in plan as well as its implication in spatial connectivity.

References

1. Eisenman, Peter. *Moving Arrows, Eros and Other Errors : An Architecture of Absence*. London: Architectural Association, 1986.

2. Goodman, Nelson. *Languages of Art*. Indianapolis/Cambridge: Hackett Publishing Company, Inc., 1976.

3. Goodman, Nelson. "How Buildings Mean." *Reconceptions in Philosophy and Other Arts and Sciences*. Indianapolis: Hackett Publishing Company, 1988, 31-48.

4. Lakoff, George, and Mark Johnson. *Philosophy in the Flesh: The Embodied Mind and Its Challenge to Western Thought*. New York: Basic Books, 1999.

5. Langer, Susanne K. *An Introduction to Symbolic Logic*. 3rd Edition. New York: Dover Publications, 1953.

6. Langer, Susanne K. *Philosophy in a New Key: A Study in the Symbolism of Reason, Rite, and Art*. Cambridge, Massachusetts: Harvard University Press. 1979.

7. Silvetti, Jorge. "The Beauty of Shadows." *Architecture Theory since 1968*. The MIT Press, 2000.

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Title Image_Graphic design by Joe Lawton, Background Graphic by Bruce R. Baxter

Image 01_Top: Art by Jennifer Albrecht (Painted by Pablo Picasso), Center: Art by David Seifert, (Music composed by Morgan Jenks) Bottom: Art by Bruce R. Baxter (Film Directed by Peter Howitt)

Image 02_Photo by Weiling He, Work by Daniel Libeskind

Image 03_Art by Weiling He