The Opacity of Glass
Rethinking Transparency in Contemporary Architecture

[1]*Seyed Yahya Islami

[1]MA (Hons), MArch (Dist), PhD, University of Edinburgh
Assistant Professor, School of Architecture, College of Fine Arts, University of Tehran, Enghelab Street, Tehran, Iran

ABSTRACT: In this paper, an exchange of letters between the philosopher Jacques Derrida and architect Peter Eisenman is used as a catalyst to discuss the material qualities of glass and its relationship with the concept of transparency in architecture. In his criticism of an architecture devoid of human qualities, Derrida uses glass, defined through Walter Benjamin's writings, as a hard and cold material that does not allow any human attachments and transparency as an absence of aura or a sense of awe. This paper attempts to elaborate that there can be different interpretations of transparency in architecture and that the material qualities of glass can be used to construct a different understanding of architecture in the current world of mass media and information. It is also argued that a particular approach to architecture has become possible in which textual constructs veil glassy buildings resulting in a translucent architecture that exploits different media to extend its influence beyond the limitations of a particular material, site or context.

INTRODUCTION

Aura, Absence and Transparency

In a letter dated October 12, 1989, addressed to Peter Eisenman, and later incorporated into the 1997 book Chora L Works, Jacques Derrida begins by apologizing for his absence at a conference in October 1989 at the University of California, Irvine. Derrida warns Eisenman not to over-read his absence in this context, however as the letter unfolds it becomes clear that his no-show at the conference is of course significant.[1]The more he attempts to justify his absence, the more Derrida reveals it to be a protest against the way in which Eisenman has interpolated the Derridean theory of absence in architectural terms.

Derrida accuses Eisenman of being insufficiently radical in his effort to "de-theologize and de-ontologize chora" (Derrida, 1997, 161).[2] He argues that chora should not be interpreted as emptiness, absence, or invisibility. While not spelling out what chora actually means in his own estimation, Derrida implies that the answer might be found in the "differences" between them (Derrida, 1997, 161). As if daring Eisenman to make

something out of this "nothing to contribute," Derrida urges him to talk about their differences in his absence (Derrida, 1997, 161).

The letter soon fixes on the world Glass, being similar to Glas, the title of Derrida's own book published in 1974:[3] "What about glass in your work?" (Derrida, 1997, 162) inviting Eisenman to reflect on his understanding of glass and transparency, so central to his book Moving Arrows, Eros and Other Errors in which even the pages of the book are completely transparent.[4] Derrida challenges Eisenman to explain his liking for glass and his position on transparency: "in which terms do you speak of glass? In terms of technology and materials?...Of transparency and immediateness, … perhaps erased between the public and private, etc." (Derrida, 1997, 162) He mentions "Erfahrung und Armut," (Poverty and Experience) one of Walter Benjamin's[5] essays in which he talks of Paul Scheerbart's Glassarchitektur (1913) as a "violent barbarism" against the privacy of humanity and criticizes glass as having "no aura" (Benjamin, 2005, 734)[7] being a material "so hard and so smooth, on which nothing can attach itself. A material cold and somber also….Glass

is generally an enemy of secrecy. It is also the enemy of possessiveness" (Benjamin, 2005, 734).[8]

Through Walter Benjamin's writings, Derrida raises issues of poverty and social class divisions and accuses Scheerbart, Loos and ultimately Eisenman of evacuating humanity from architecture and creating a new kind of poverty: "Those people like Scheerbart, do they dream of buildings of glass (glasbauten) in order to recognize a new poverty (bekenner einer newun Armut)?" (Derrida, 1997, 163)[9] Thus, he asks whether Eisenman "believe[s] too much in absence" and whether in his attempt to deconstruct anthropomorphism, he has forgotten the human altogether.[10] Eventually Eisenman is left with the monumental task of replying to such critical questions and to defend his position towards transparency and glass in architecture.

Glass: Transparency, Translucency and Colour

Walter Benjamin, whose struggle against the aura defines all his work[11] was greatly inspired by Paul Scheerbart's Glasarchitektur of 1913.[12] However, in his essay of 1934, "Experience and Poverty" Benjamin declared: "Die Dinge aus Glas haben keine Aura." (Things of glass have no aura) raising the issue that glass architecture is devoid of a sense of awe or human appreciation that one attributes to great works of art.

Paul Scheerbart was a visionary not only of the aesthetic possibilities of glass, but of its architectural and technological merits. Scheerbart took his vision of glass architecture beyond the spheres of technology and design and into the realm of social and theoretical critique by claiming that in order to progress as a culture and civilization, people should come out of closed rooms and embrace transparency and light:

"If we want our culture to rise to a higher level, we are obliged, for better or for worse, to change our architecture. … We can only do that by introducing glass architecture, which lets in the light of the sun, the moon, and the stars, not merely through a few windows, but through every possible wall, which will be made entirely of glass – of coloured glass." (Scheerbart, 2002, 1) However, Scheerbart's vision was not of a purely transparent architecture, but one that was dominated by light, colour and one might even say translucency.[13] Inspired by Gothic architecture, Scheerbart's vision of the future revolves around glass that is given different tints, thus protecting the inside from the gazes of the outside, but allowing the silhouettes of either side to be visible on both sides. It is therefore possible to argue that Derrida's (and Benjamin's) reduction of Scheerbart's vision of glass to the removal of humanity from architecture is perhaps too simplistic if not misaligned.

Scheerbart's glass architecture has two surfaces, one dealing with the outside and the other with the inside:

"…the double glass wall is an essential condition for all glass architecture. The walls can be a meter apart – or have an even greater space between. The light between these walls shines outward and inward, and both the outer and the inner walls may be ornamentally coloured. If, in so doing, too much light

is absorbed by the colour, the external wall may be left entirely clear." (Scheerbart, 2002, 4)

This double-pane construction allows the glass wall to be clear and opaque at the same time - in other words, translucent in combination. In Scheerbart's vision, glass architecture is defined as one which illuminates and is illuminated by different colours of light. It is therefore light, colour and translucency that Scheerbart finds inspiring in glass, rather than clear transparency or exposure:

"There will be no need to look at nature through a coloured piece of glass. With all this coloured glass everywhere in buildings, and in speeding cars and air- and water-craft, so much new light will undoubtedly emanate from the glass colours that we may well be able to claim that nature appears in another light." (Scheerbart, 2002, 56)

However, it is important to note that in Scheerbart's vision of the future, almost everything is made of glass and he admits that humanity needs to adjust itself to these new conditions:

"It will surely appear self-evident that the furniture in the glass house may not be placed against the precious, ornamentally-coloured glass walls. Pictures on the walls are, of course, totally impossible. …Glass architecture will have a tough fight on its hands, but force of habit must be overcome." (Scheerbart, 2002, 8)

Yet, the hardness, the durability, and the indestructibility of glass architecture is always at odds with the perishable human body. In glass houses it is difficult to be anything but glass; it is difficult to be opaque, perishable and vulnerable. Moreover, it is difficult to leave traces on glass; to personalize glass. This is what Benjamin believed to be dangerous and harmful in such architecture. Glass he believed was the enemy of intimacy and privacy and society must protect its citizens' right to such concepts. Bruno Taut's Glass House (which was constructed with Scheerbart's help and expertise) creates a space that is difficult to personalize. It is hard to imagine the occupants hanging picture frames on their walls, even more difficult to see them have furniture in this building, which would destroy the visual purity of the colour-tinted glass walls. Thus the building is difficult to adopt, since it is too transparent not in the literal sense, because the walls are in fact translucent, but perhaps in the sense that their very conceptual being is about letting light through without obstruction. Anything that blocks the passage of light, including human beings, stands out against the crystalline glass architecture.

Literal and Phenomenal Transparency

It is at this juncture that it becomes important to clarify our conception of transparency. In "Transparency: Literal and Phenomenal" (1976) Colin Rowe and Robert Slutzky have showed that there can be two different kinds of transparency in architecture. They proposed "phenomenal transparency" as "a simultaneous perception of different spatial locations," and "that which is clearly ambiguous" (Rowe at al., 1976, 161). This can be compared to the visual effects produced by Kandinsky's "Dream Motion" where the overlapping of the geometric

Fig. 1: Bruno Taut's Glass House built with the help of Paul Scheerbart whose writing adorned the exterior base of the dome. The house was an explosion of color. The interior was constructed of glass floors and walls and mosaic windows.
Source (Left): http://germanhistorydocs.ghidc.org/images/glass%20house%203%20copy.jpg
Source (Right): http://germanhistorydocs.ghi-dc.org/images/glass%20house%203%20copy.jpg

figures represented in two-dimensions make the relative spatial locations of these figures difficult to fathom.

Rowe and Slutzky demonstrated their conception of phenomenal transparency in architecture through a comparison of Walter Gropius's Bauhaus building in Dessau (as an example of literal transparency) with Le Corbusier's villa Stein at Garches (as an example of phenomenal transparency). The Bauhaus, they argued, relies on an over-dramatization of glass, with the assumption that literal transparency produces the same visual effect as Cubists paintings. However, since the Bauhaus building uses transparency literally, "the observer is…denied the possibility of experiencing the conflict between a space which is explicit and another which is implied." (Rowe et al., 1976, 171) Thus, the Bauhaus approach lacks "potential ambiguity" in that the viewer is "denied the possibility of penetrating a stratified space which is defined either by real planes or their imaginary projections." (Rowe et al., 1976, 171) The villa at Garches however, is presented as a case of phenomenal transparency displaying a contradiction between the façade and internal spatial configuration. In this case glass is used more as a taut surface carefully framed and framing other elements in the façade, rather than simply used for literal transparency. Therefore, the façade of the villa allows for multiple interpretations, or clearly ambiguous readings.

Rowe and Slutzky's essay highlights the visual richness of phenomenal transparency in architecture, which is in fact an effect produced by the careful arrangement of surfaces. While literal transparency is solely based on the characteristics of the material glass, in which one can see beyond its surfaces, phenomenal transparency is based on organizational complexity where opaque and transparent surfaces are arranged in such a way that they imply depth and different interpretations. This latter approach to transparency includes an immanent ambiguity that offers the potential for multiple readings:

"There is a continuous dialectic between fact and implication. The reality of deep space is constantly opposed to the inference

Fig. 2: Literal and Phenomenal Transparency: Bauhaus Building (Walter Gropius)
Source: bauhaus-online.de
and Villa Garche (Le Corbusier).
Source: http://larryspeck.com/2010/08/04/villa-stein-villa-de-mozie/
Rowe and Slutzky argue that most images of the Bauhaus are taken at an angle in order to demonstrate its three dimensionality. The same literal strategy is adopted for transparency, in that depth is exposed through large panes of glass. Images of Le Corbusier's villa however, are often taken from the front view, because it is through the arrangement of the surfaces of the façade that notions of depth are expressed. The glass windows are treated as the surfaces of the façade that imply depth, not holes that expose the deep interior.

of shallow space; and by means of the resultant tension, reading after reading is enforced." (Rowe et al., 1976, 170)

Phenomenal transparency shifts the emphasis from the penetration of surfaces for visual and conceptual clarity, to surface design, or surface expression to arrive at visual complexity and interpretive diversity. Such concepts demonstrate that transparency does not necessitate glass, the thinning-out, disappearance or puncturing of surfaces, nor an association with tectonic exposure or conceptual clarity. In other words, it is possible to be transparent, without being clear and it is possible to be communicative without being literal. Phenomenal transparency highlights the richness of implication and the significance of surface expression. It also demonstrates that allusions to depth can be compressed to the surfaces, a process that can be called surfacing depth. Further still, phenomenal transparency offers the possibility of seeing glass and architectural openings (such as windows, doors, or screens) as the continuation of the architectural surface, rather than visual holes in the wall.

Exactly defined, this understanding of actual and apparent transparency is a precise tool for the study of architecture distinguishing between what appears and what is intended to appear. Thus, glass can have aura, perhaps not through literal transparency and a simplistic use of glass, but through phenomenal transparency, or the possibility of organizing transparent and opaque surfaces in a manner, which offers a multitude of interpretations - a transparent vagueness.

The Opacity of Glass and the Appeal of Translucency

Apart from transparency, glass possesses another attribute, namely reflection, or what Scheerbart called "Tiffany effects." (Scheerbart, 2002, 23)[14] Glass becomes opaque through reflection. A reflective glass is an opaque surface much like a wall, in that it does not allow the gaze to pass through. When confronted with the facade of a reflecting glass building, such as the Westin Bonaventure Hotel in Los Angeles,[15] one searches for some relief without achieving success. According to Fredric Jameson the Bonaventure is similar to many other postmodern buildings in that it aspires to being a total space and a complete world. Therefore it does not have any openings within its reflective surfaces, which would interact with the outside world. However unlike modernist architecture, the building does not make distinct its separation from the city (by the use of pilotis for example). Instead it lets the city be as it is, without aspiring to some Utopian aspiration. (Jameson, 1991, 42) This is confirmed by the great reflective glass surfaces of the building, which at the same time as repelling the external city, somehow merge with it through reflection: "…the glass skin achieves a peculiar and placeless dissociation of the Bonaventure from its neighbourhood: it is not even an exterior, inasmuch as when you seek to look at the hotel's outer walls you cannot see the hotel itself but only the distorted images of everything that surrounds it." (Jameson, 1991, 42) Thus, in such architecture, the reflecting glass becomes a mystifying opaque surface with a unique aura of its own.

Returning to Derrida letter to Eisenman we are presented with glass as a material without aura, symbolising an absence or the removal of human values from architecture. Derrida argues that the prevalent use of glass hints towards a particular rhetoric, which "believes too much in absence". Therefore, it has become unfashionable to discuss a design in terms of human and phenomenal events, in case this might be seen to posit a humanist reciprocity of the intention of an architect and an ideal experience of the resultant building. Thus, the designer justifies his building through theoretical work, which is often quite different to how the building is perceived.

The pleasures of a deconstructive architecture are said to be "the pleasures of absence". (Jencks, 1989) This could be understood as the result of moving from a refusal of the concept of a common and unitary subjectivity, to making that refusal a figure; constructing a monument to absence. In Eisenman's

Fig. 3: Bonaventure Hotel, Los Angeles, John Portman, 1976. Glass becoming opaque through reflection.   Source:.http://oranges-world.com/data_images/bonaventure-hotel-los-angeles.jpg

architecture, experiential categories and techniques are are excluded in a polemic. Experience is demonstrably reduced, and theory elevated to the category of an object of experience. Derrida implies that the resultant architecture is like glass – without aura and without sympathy to human vulnerabilities. Glass does not rust, rut, or change. It is not permanently affected by time. When it becomes dirty, it is easily cleaned and returned to its original state. Similarly, Eisenman's theories can change while his architecture stays the same. (Evans, 1997, 143) It is therefore possible to argue that such architecture is crystalline, hard and transparent like glass. It is not subject to weathering or change, like wood or stone, precisely because it has become stripped of its softer, more perishable qualities.

Yet, in responding to Derrida's criticism, Eisenman adopts an interesting stance. He talks of "presentness" as a condition between absence and presence:

"In my view, your deconstruction of the presence/absence dialectic is inadequate for architecture precisely because architecture is not a two-term but a three-term system. In architecture, there is another condition, which I call presentness, that is neither absence nor presence, neither form nor function, neither the particular use of a sign nor the crude existence of reality, but rather an excessive condition between sign and the Heideggerian notion of being…" (Eisenman, 1997, 188)

Eisenman talks of the materiality of glass and how it should not been seen as completely transparent, nor as a complete absence of materiality or humanity. We have seen how glass surpasses simplistic definitions that limit it to literal or pure transparency. Glass can have many attributes like colour, translucency, phenomenal transparency and reflectivity. Therefore, it is possible to use glass to achieve a different understanding of Eisenman's architecture.

This paper argues that Eisenman's architecture exploits the appeal of translucency through his theoretical writing, which acts as a surface (or a process of surfacing) that creates a particular aura and hints towards his vulnerable side: "I hope this causes you some dis/ease", he writes in his reply to Derrida's scathing approach evident in his text: "to lead you to ruin and destruction." (Derrida, 1997, 164) The relationship between Eisenman's theories and his buildings is revealing of his human opacity. The clue lies in what Eisenman tells us his buildings do and what his architecture actually does. According to Evans, Eisenman's writing is an "armoured vehicle" (Evans, 1997, 121) protecting his architecture, where protection works in both ways: "…protecting his projects from the audience" and protecting "the audience from his projects. In particular it casts a veil over their static, obdurate uncommunicative qualities." (Evans, 1997, 122)

Eisenman himself, claims that his architecture looks for another aura: "can there be an other in the condition of aura in architecture, an aura that both is secret and contains its own secret, the mark of its absent openness?" (Eisenman, 1997, 188) In the absence of physical experiences and the over-abundance of theory, his architecture engages us in a word-play, the physical building becoming only a part of the process. Perhaps the aura of such an architectural approach is in the discontinuity between writings and buildings, between the play of words and the play of materials. However, this opacity that makes such architecture translucent only manifests itself to those who can access Eisenman's textual constructions.

CONCLUSION

What is it that we see when we look at a glass building? Is it transparent? Does it have an aura? For Benjamin and Derrida the prospect offered by Glasarchitecktur was of pure transparency and an end to the aura and the human in the work of art. However, this paper has argued that Scheerbart's vision of Glasarchitecktur was more about colour, translucency and light, none of which need to be in contradiction to the human aspects of an architectural space. Moreover, it is possible to add to the aura of glass, not through some sort of veiling, but rather through the opacity of reflection.

Many have expressed their shock and revulsion at the new architecture of the early twentieth century, which advocated transparency. Others have expressed their admiration for Modern concepts such as purity, functionalism and the destruction of aura.[16] Yet, both parties have considered glass as the symbol of transparency and modernity. But, glass is not completely transparent - it always has some opacity, albeit miniscule. Translucency, as Scheerbart emphasised, embodies the aura that Benjamin searches for and Rowe and Slutzky highlighted in their definition of phenomenal transparency. It is a condition that encourages curiosity for what lies beyond and allows for multiple interpretations. Translucency is about the vague impression, the enchantment of silhouettes, a chiaroscuro of light and shade. Translucency and silhouettes give enough information to leave the imagination free.

When glass is used in architecture, it is often used with translucency in mind. It is the minute reflectivity, the slight tint, the glowing edges, the waviness of surfaces and the very presence or the "presentness" (Eisenman, 1997, 188) of glass that is valued, which separates it from a mere whole in the wall. The translucency of glass is what Evan calls "a hinting at reconciliation" (Evans, 1997, 146) in architecture. It is when everything does not fit its theory, or when the theoretical definition fails.[17]

Eisenman's writings create a sense of translucency by veiling his architecture with words. It is the tension between the words and the actuality of such architecture that results in this translucency, and which fuels the endless debates surrounding such works of art. This is an architecture that uses textual constructs to extend its influence beyond the limitations of site and context and into the mass media. Thus, the process of deciphering which parts of Eisenman's architecture complies with his theoretical claims, becomes an essential element of experiencing Eisenman's buildings and perhaps the very appeal of such architecture.

It is the search for transparency that drives many, including

Evans, to decipher Eisenman's architecture "[I]rritated by his [Eisenman's] tactical deployment of the fashionable concept Writing, busy descrying the deplorable function of the writing itself in providing obscurity,…" (Evans, 1997, 135) Yet, it is precisely this desire for transparency that helps such architecture by adding to the theoretical veil, which ironically makes such architecture appealing:

"A word can stand in front of the thing it signifies, casting so dark a shadow that only with great difficulty can the virtual absence of the thing be made out. Maybe this is a less unusual occurrence than we would like to believe." (Evans, 1997, 140)

ENDNOTES

1.See Jacques Derrida, "A Letter to Peter Eisenman," Assemblage, no. 12, August, 1990, pp. 6-13. See also Jacques Derrida et al., Chora L Works: Jacques Derrida and Peter Eisenman, Monacelli Press, New York, 1997

2.Derrida writes: "I had nothing to 'do' and could not have done anything, I want to say, for the city of Paris, for La Villette, you see that which I want to say [and it is perhaps, between us, all the difference]." Derrida, "Letter to Peter Eisenman" in Chora L Works: Jacques Derrida and Peter Eisenman, p. 161.

3.In Glas Derrida writes his text in two columns: the left column being about Hegel and the right column about Genet. However each column meanders around various quotations, both from the works discussed and from dictionaries. Yet the main text does not discuss the quotations, as one would expect from a normal commentary. Sometimes words are cut in half by a quotation, which may last several pages. See Jacques Derrida et al, Glas, translated by John P. Leavey, Jr. and Richard Rand, University of Nebraska Press, 1990.

4.See Peter Eisenman, Moving Arrows, Eros and Other Errors: an Architecture of Absence, Architectural Association, 1986.

5.Walter Benjamin was a literary critic, philosopher, sociologist and essayist whose work has made influential contributions to aesthetic theory and critical theory.

6.Paul Scheerbart was an author of fantastic literature and drawings. He was associated with expressionist architecture and one of its leading proponents, Bruno Taut. See Paul Scheerbart, Glasarchitektur, edited by Olaf Nicolai, Revolver, 2002

7.Benjamin writes: "Objects of glass have no 'aura'." See Walter Benjamin, "Poverty and Experience" in Walter Benjamin: Selected Writings 1931-1934, edited by Michael W. Jennings, Harvard University Press, 2005, pp. 731-744, p. 734

8.Derrida quotes Benjamin, in Derrida, "Letter to Peter Eisenman" in Chora L Works: Jacques Derrida and Peter Eisenman, p. 162

9.Derrida quoting Benjamin, in Derrida, "Letter to Peter Eisenman" in Chora L Works: Jacques Derrida and Peter Eisenman, p. 163. See also Benjamin, "Poverty and Experience" in Walter Benjamin: Selected Writings 1931-1934, edited by Michael W. Jennings, p. 734

10.Derrida writes: "And you who would like to remove architecture from the measurement of man, from his very scale, how do you interpret this "destructive discourse," according to Benjamin, in the mouth of "those who challenge the resemblance to humanity – this principle of humanism." Derrida, "Letter to Peter Eisenman" in Chora L Works: Jacques Derrida and Peter Eisenman, p.164

11.Benjamin's most influential work in this topic is an essay entitled "The Work of Art in The Age of Mechanical Reproduction" (1936), in which he argues new technologies have caused the "withering of the aura" of works of art by making them accessible to the masses. Benjamin defines "aura" as the false sense of awe and reverence that one might feel in front of an original work of art, which would have more to do with the "cult value" of the work than its true artistic merit. This cult value can be added cultural value, a sense of privilege or importance generated by limited accessibility, or even association with belief. See Walter Benjamin, "The Work of Art in the Age of Mechanical Reproduction" in Illuminations: Essays and Reflections, ed. by Hannah Arendt, trans. by Harry Zohn, Schocken Books, New York, 1969, pp. 211-245 p. 221

12.See Paul Scheerbart, Glasarchitektur, edited by Olaf Nicolai, Revolver, 2002.

13.Scheerbart's approach towards glass and colour is evident in the following quote: "[w]herever the use of glass is impossible, enamel, majolica and porcelain can be employed, which at least can display durable colour, even if they are not translucent like glass." Scheerbart, Paul, Glass Architecture, 21.

14.Named after the famous American Louis Comfort Tiffany (1848-1933) who invented the partially mirroring glass. Scheerbart, strictly forbids the use of such reflection in his glass architecture: "[w]hen kaleidoscopic effects are wanted, they are perfectly justified. Otherwise it is best to do without the quicksilver-mirror; for it is dangerous – like poison." Scheerbart, Glasarchitektur, 23

15.By architect and developer John Portman.

16.The false importance of a work of art that detaches it from the masses.

17.Evans writes "Eisenman's attempt to divest architecture of its superficial meaning was most revealing and effective when something prevented it from succeeding." Evans, "Not to be used for Warpping Purposes" in Robin Evans: Translations from Drawing to Building and Other Essays, p. 149

REFERENCES

1.Benjamin, Walter, "Poverty and Experience" in Walter Benjamin: Selected Writings 1931-1934, edited by Michael W. Jennings, Harvard University Press, 2005, pp. 731-744

2.Benjamin, Walter, "The Work of Art in the Age of Mechanical Reproduction" in Illuminations: Essays and Reflections, ed. by Hannah Arendt, trans. by Harry Zohn, Schocken Books, New York, 1969, pp. 211-245 p. 221

3.Derrida, Jacques, et al, Glas, translated by John P. Leavey, Jr. and Richard Rand, University of Nebraska Press, 1990

Derrida, Jacques, Eisenman, Peter, ed. Kipnis, Peter, and 4.Leeser, Thomas, Chora L Works: Jacques Derrida and Peter Eisenman, Monacelli Press, New York, 1997

5.Eisenman, Peter, Moving Arrows, Eros and Other Errors: an Architecture of Absence, Architectural Association, 1986.

6.Evans, Robin, "Not to be used for Warpping Purposes: A Review of the Exhibition of Peter Eisenman's Fin d'Ou T Hou S" in Robin Evans: Translations from Drawing to Building and Other Essays, Architectural Association, London, 1997, p. 143

7.Jameson, Fredric, Postmodernism, or, the Cultural Logic of Late Capitalism, Verso, London, 1991.

8.Jencks, Charles, "The Pleasure of Absence" in ed.s Andreas Papadakis et al, Deconstruction: Omnibus Volume, Academy Press, London, 1989, pp. 119-131

9.Rowe, Colin and Slutzky, Robert, "Transparency: Literal and Phenomenal" in Colin Rowe, The Mathematics of Ideal Villa and Other Essays, The MIT Press, Cambridge Mass.: London, 1976, pp. 159-185

10.Scheerbart, Paul, Glasarchitektur, edited by Olaf Nicolai, Revolver, 2002