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Deconstructivism: Richness or Chaos to Postmodern Architecture

Olivier Clement Gatwaza[1], Xin CAO[1]

[1]School of Landscape Architecture, Beijing Forestry University, 35 Qinghua East Road Beijing, 100083 China

Abstract: In this paper, we examine the involvement of deconstructivism in the evolvement of postmodern architecture and ascertain its public acceptance dimensions as it progressively conquers postmodern architecture. To achieve this, we used internet search engines such as Google, Yahoo, Wikipedia and Web of Science, we also used knowledge repositories such as Google Scholar and the world's largest travel site TripAdvisor to gather information and data about origin, evolution, characteristics and relationship between postmodernism and deconstructivism. We've based our judgment on concepts from famous architects, political leaders and public opinion to access the suitability of architectural style. The result of this research shows that postmodernism architecture buildings have an average 96.8% of visitor's satisfaction ranking; while deconstructivism architecture buildings when taken alone, a decrease of 2% in visitor's satisfaction ranking is perceived. In addition, strong comments against the upcoming architectural style confirm that deconstructivism still has ingredients to endorse in order to impose its trajectory towards the top of modern architecture. Being a piece of a globalized world, deconstructivism architecture in the most of the cases tends to disregard the history and culture of its location which compromise its innovative, complexity and ingenious character, bringing down its original taste.

Keywords: Architectural style, building, Chaos, Postmodernism

1 INTRODUCTION

1.1 Research background

Its first examples being generally cited as being from the 1950s, postmodern architecture began as an international style and continues to influence present day's architecture (Central Intelligence Agency, 2012).

After a number of architectural styles in different parts of the world and in different periods: Aegean, Greek, Roman, Medieval, Renaissance, Baroque, Neoclassical, Early and Late Modern architecture, a new tendency became obvious as some architects started to distance themselves from modern functionalism which they think as boring, and which of the public considered unsympathetic and even hostile. These architects turned their views into the past, quoting past features of various structures and combining them together to create a new concept. The Postmodernism assisted the coming back of columns and other components of pre-modern designs, sometimes adopting classical Greek and Roman (But not simply recreating them as it was done before in neoclassical architecture but adapting them by using other technological means such as cantilevers). While postmodernism went back in the past to grab the ancient conceptions that modernism had avoided, deconstructivism also excluded the postmodern acceptance of such ancient references, as well as the concept of ornament as decoration.

In addition to disagreements, a defining document for deconstructivism and postmodernism was Robert Venturi's "Complexity and Contraction in Architecture" (1966). It debates against the purity, clarity and simplicity of modernism.

During the late 1980 in architecture evolved the idea of deconstructivism from postmodernism. The concept came to the world's attention when a group of innovative architects - Peter Eisenman, Frank Gehry, Zaha Hadid, Rem Koolhaas, Daniel Libeskind, Coop Himmelbau, and Bernard Tschumi - featured in an exhibition titled Deconstructivist Architecture at the Museum of Modern Art in New York. Since that time, its heritage has invaded the field of contemporary architecture and is expanding today all over the world in the impressive buildings designed by the likes of Zaha Hadid, Frank Gehry and OMA to name but a few (Design Curial, 2015).

1.2 Research problem

Deconstructivism is an improvement of postmodern architecture that came out to the global attention in the late 1980s. It is characterized by concepts of fragmentation, non-rectilinear shapes which serve to distort and dislocate some of the elements of

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CAO Xin (Correspondence)
shuiyunjv@qq.com
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architecture, such as structure and envelope and an interest in handling ideas of a structure's surface or skin. The visual appearance outcome of buildings that show the many deconstructivism "styles" is characterized by a encouraging unpredictability and a well organized chaos. Important proceedings in the early history of the deconstructivism movement include the 1982 Parc de la Villette architectural design competition especially the entry from Jacques Derrida and Peter Eisenman (Derrida & Eisenman, 1997) and Bernard Tschumi's winning entry, the Museum of Modern Art's 1988 exhibition in New York about deconstructivist architecture, organized by Philip Johnson and Mark Wigley, and the opening of the Wexner Center for the Arts in Columbus in 1989, designed by Peter Eisenman, The New York exhibition featured works by Frank Gehry, Rem Koolhaas, Daniel Libeskind, Peter Eisenman, Zaha Hadid, Coop Himmelbau, and Bernard Tschumi. Since the exhibition, many of the architects who were associated with deconstructivism have distanced themselves from the term (Saylor Academy, 2011). Nonetheless, the term has held and has now, in fact, come to embrace a general tendency within contemporary architecture. Originally, some of the architects known as deconstructivist were inspired by ideas of the French philosopher Jacques Derrida. Eisenman developed a private liaisons with Derrida, but even so his methodology to architectural design was developed long before he became a deconstructivist. His point is that deconstructivism should be perceived as an extension of his interest in deep-seated formalism. Some disciples of deconstructivism were on the other hand influenced by the previous experimentation and geometric inequities of Russian constructivism. There are supplementary references in the 20th-century deconstructivism movements: the modernism/postmodernism interplay, minimalism, cubism, expressionism and contemporary art. The effort in deconstructivism gradual evolution is to move architecture away from what its practitioners see as the constricting "rules" of modernism such as "form follows function", "purity of form", and "truth to materials".

Even though deconstructivism architects criticized postmodernists of incompetence and qualified their designs as incoherent or arbitraries (Venturi, 1966), Deconstruction on its turn also became not everybody's preference and was enormously controversial all along years, due largely to a mixture of its adherents making extremely confrontational claims and its critics having trouble appreciative the often very difficult writings of Derrida and his followers. Strong critics against deconstructivism architecture continued to be heard from the four sides of the globe until recently when some of the global high level political leaders called for an end to the construction of "weird architecture" in the country (Arch Daily, 2014). The blames on deconstructivism architecture came to confirm that though it attempted to bring improvements to postmodern architecture, it is still far from being a perfect and ideal architecture style. In this paper, our concern is to know the relative level of its public acceptance compared to the postmodern architecture. We also wish to know some reasons that make a so complex and creative architectural style not to get onto everybody's admiration.

1.3 Research objective

The new technology and new tools in Architecture show a strong connection between deconstructivism and modernity. During this contemporary period CAD (Computer-Aided Design) is a new tool that modernized architects work in most aspects of architecture, mainly the particular nature of deconstructivism makes the use of informatics particularly relevant. Though computer has brought the designing of complex shapes up to the higher stage and much easier, not everything that looks abnormal is "deconstructivist". Computer aided design is currently a crucial Three-dimensional modeling and animation (virtual and physical) assists in the conception of very complex spaces, in addition the ability to link computer models to manufacturing jigs (CAM: Computer-Aided Manufacturing) permits the mass construction of subtly different modular elements to be accomplished at reasonable costs. In retrospect many early deconstructivist accomplishments seem to have been conceived with the aid of a computer (Computer-Aided Design), but were not; Zaha Hadid's sketches for instance. Another example, Gehry is noted for creating many physical models as well as computer prototypes as part of his design process. On the other hand deconstructivism in contemporary architecture attitudes is in opposition to the ordered rationality of modernism. Its relationship with postmodernism is also decidedly opposite.

Even though postmodernist and emerging deconstructivist architects published theories alongside each other in the journal '*Oppositions'* (published 1973-84), that journal's tendency marked the foundation of a significant breakdown between the two movements. Deconstructivism took a argumentative stance vis-a-vis much of architecture and architectural history, wanting to disjoin, dissociate and disassemble architecture (Tschumi, 1994). While postmodernism returned to include often ingeniously or ironically the historical references that modernism had excluded, deconstructivism rejects the postmodern acceptance of such positions. It also rejects the idea of ornament as an after-thought or decoration. In addition to oppositions, another text that separated deconstructivism from the fray of modernism and

postmodernism was the publication of Robert Venturi's Complexity and Contradiction in architecture (1966). A defining point for both postmodernism and for deconstructivism, Complexity and Contradiction argues against the purity, clarity and simplicity of modernism. With its publication, functionalism and rationalism, the two main branches of modernism were overturned as paradigms according to postmodernist and deconstructivist readings, with differing readings. The postmodern reading of Venturi (who was himself a postmodernist) was that ornament and historical allusion added richness to architecture that modernism had foregone. Some postmodern architects endeavored to reapply ornaments even to economical and minimal buildings, an effort best illustrated by Venturi's concept of "the decorated shed" Rationalism of design was dismissed but the functionalism of the building was still somewhat intact. This is close to the thesis of Venturi's next major work (Venturi, 1977). That signs and ornament can be applied to a pragmatic architecture, and instill the philosophic complexities of semiology.

Deconstructivism architecture is based in part on the theory of post-structuralist philosopher Jacques Derrida, the movement is characterized by fragmentation, an interest in manipulating the surface or skin of a built structure, and non-rectilinear shapes which appear to distort and dislocate elements of architecture, such as structure and envelope.

A strong relationship (father-son relationship) exist between postmodernism and deconstructivism and strong points of divergence. The seemingly one in two styles which progress on the same historical period when technology has brought enough tools to create any form of design ought use them to generate spotless designs. The objective of this research is to bring our contribution to the perfection of today's architecture.

2 METHODOLOGY

2.1 Literature review

"It is ironic that the work of Coop Himmelblau, and of other deconstructive architects, often turns out to demand far more structural ingenuity than works developed with a "rational" approach to structure" (Adrian Forty, 2000)

A top 10 list (Design Curial, 2015) of the most important works from postmodernism was established by a postmodernism's famous chroniclers Charles Jencks. The list was submitted to undergo a popularity test using a travel site TripAdvisor. The site was chosen thanks to its enormous capacity of supplying numerical information about the views of travelers who visited a given point of interest & landmark, sight & landmark, nature & parks, ancient ruins, hiking trails, accommodation, restaurant and outdoor activity. It is able to show the reviewer highlights, visitor rating (Excellent, Very good, Average, Pool and Terrible) and gives a popularity index to determine overall traveler satisfaction. The site reaches 350 million unique monthly visitors and more than 290 million reviews and opinions covering more than 5.3 million accommodations, restaurants and attractions.
On the other hand a top 8 list of iconic deconstructivism architecture building established by Design Curial Magazine in March 2015 was also taken to undergo the same appreciation test using a travel site TripAdvisor.
In both cases, the site was visited on November 28th, 2015.

2.2 Statistical analysis of data

The data collected were analyzed using statistical procedures in order to get the idea of the average level of acceptance or rejection of the deconstructivism architecture by the population.
There is one central formula that is used to answer questions pertaining to an average. This formula can be manipulated in many different ways, enabling us to create different iterations on mean problems
The following is the mathematical formula for the arithmetic mean (a fancy name for the average).

$$AM=\frac{1}{n}*\sum_{i=1}^{n} a_i=\frac{1}{n}(a_1+a_2+\ldots+a_n) \qquad (1.1)$$

AM=arithmetic mean (or average)
n= the number of terms (e.g., the number of items or numbers being averaged)
a_i =the value of each individual item in the list of numbers being averaged

The following is the formula for the arithmetic mean, stated in a more readable and understandable form:

$$AM=\frac{S}{N} \qquad (1.2)$$

AM= arithmetic mean (or average)
N= the number of terms (e.g., the number of items or numbers being averaged)
S= the sum of the numbers in the set of interest (e.g., the sum of the numbers being averaged)

3 RESULTS AND DISCUSSIONS

3.1 Data processing and results

Charles Jencks, one postmodernism's famous chronicler said that since the turn of the millennium, the movement has experienced an unlikely rebirth, and chose the 10 of the most important works from postmodernist architecture's second wave:

1. Caixa Forum, Madrid, by Herzog & de Meuron
2. The Beijing Olympic Stadium a.k.a The Bird's Nest, 2004-2008, by Herzog & de Meuron, designed with the artist Ai Wei Wei.
3. Ravensbourne College by Foreign Office Architects
4. Serpentine Galleries Pavilion, 2002, by Toyo Ito's and Cecil Balmond
5. The Gherkhin, by Norman Foster
6. The New Guggenheim, Bilbao, by Frank Gehry
7. Memorial to the Murdered Jews of Europe, Berlin, by Peter Eisenman
8. The School of Slavonic & East European Studies, London, by Alan Short
9. Santa Caterina Market, Barcelona, by EMBT
10. CCTV, Beijing, by Rem Koolhaas

Table 1: ***Visitor's review on Charles Jencks's list of the 10 most important works from postmodernist architecture***

N°	Building name	Total Number of Comments	Number of Positive Comments	Number of Negative Comments	Percentage of approval (%)
1.	Caixa Forum, Madrid	890	865	25	97
2.	The Beijing Olympic Stadium	736	723	8	98
3.	Ravensbourne	-	-	-	-
4.	Serpentine Galleries Pavilion	-	-	-	-
5.	The Gherkhin, by Norman Foster	193	189	4	98
6.	The New Guggenheim, Bilbao, by Frank Gehry	6038	5759	279	95
7.	Memorial to the Murdered Jews of Europe, Berlin	11179	10807	372	97
8.	The School of Slavonic & East European Studies	-	-	-	-
9.	Santa Caterina Market	180	167	13	93
10.	CCTV, Beijing	58	58	0	100

Design Curial Magazine also published a list of 8 iconic deconstructivism architecture buildings:

1. Vitra Design Museum 1989, by Frank Gehry
2. UFA-Cinema Center 1998, by Coop Himmeln
3. Central Library 2004, by OMA
4. Jewish Museum, Berlin 1999, by Daniel Libeskind
5. Vitra Fire Station 1993, by Zaha Hadid
6. CCTV headquarters 2008, by OMA
7. Parc de la Villette 1982-1998, by Bernard Tschumi & Architects
8. Wexner Center for the Arts 1988, by Peter Eisenman

Table 2: ***Visitor's review on Design Curial Magazine's list of the 8 iconic deconstructivism architecture building***

N°	Building name	Location	Total Number of Comments	Number of Positive Comments	Number of Negative Comments	Percentage of approval (%)
1.	Vitra Design Museum 1989, by Frank Gehry	Weil am Rhein, Germany	274	269	5	98
2.	UFA-Cinema Center 1998, by Coop Himmeln	Dresden	2	2	0	100
3.	Central Library 2004, by OMA	Seattle	1249	1216	33	97
4.	Jewish Museum, Berlin 1999, by Daniel Libeskind	Berlin, Germany	1801	1648	153	92
5.	Vitra Fire Station 1993, by Zaha Hadid	Weil am Rhein, Germany	-	-	-	-
6.	CCTV headquarters 2008, by OMA	Beijing, China	58	58	0	100
7.	Parc de la Villette 1982-1998, by Bernard Tschumi & Architects	Paris, France	247	220	27	89
8.	Wexner Center for the Arts 1988, by Peter Eisenman	Ohio, USA	24	21	3	88

Wishing to make a comparison between postmodernism architecture and deconstructivism architecture popularity, we have compared the average percentages of the two tables.
Applying the formula (1.1) to the Table1 to get the arithmetic mean, we get the following:
Arithmetic mean for table $AM_1=\frac{1}{7}$ *(97+98+98+95+97+93+100) = 96.8
Applying the same formula (1.1) to the Table2 to get the arithmetic mean, we get the following:
Arithmetic mean for table $AM_2=\frac{1}{7}$ *(98+100+97+92+100+89+88) = 94.8
From the results above we get the following average percentages:
For postmodernism architecture: 96.8% of visitor's satisfaction
For deconstructivism architecture: 94.8% of visitor's satisfaction

3.2 Discussions

By analyzing the Table1, we notice that some of postmodernism architecture buildings have characteristics of deconstructivism. This has nothing abnormal since deconstructivism is a development of postmodern architecture. Due to the fact that deconstructivism is an architectural movement that encourages radical freedom of form and the open manifestation of complexity in a building rather than strict attention to functional concerns and conventional design elements (as right angles or grids), makes it being able to create new designs with an incredible creativity. A 96.8% visitor's satisfaction ranking shows clearly that postmodernism designs (including its deconstructivism wing) are highly welcomed by spectators. Nevertheless, it is clear that it is not to everyone's taste. When deconstruction architecture is put sidewise from postmodernism architecture as it was done on the Table2, a decrease in satisfaction percentages is noticed. A 94.8% visitor's satisfaction ranking shows clearly that deconstructivism architecture has already gained the hearts of the majority of spectators; nevertheless, a decrease of 2% visitor's satisfaction compared to postmodernism architecture shows that the style still has a number of features to improve so as to please everyone's sense. Moreover, looking at the comments strength against

the style, architects should think twice before adopting constructivism architecture.

3.3 Challenges

Our research was only limited to the most famous pieces of postmodernism and deconstructivism which seemingly are already the most successful cases of the two Architectural styles. This needs to be considered in the future development of this subject.

Some buildings of the list above are not tourist attraction and could not get visitor's satisfaction ranking and comments. That reason made us only use the available data (7 building on each list).

4 CONCLUDING REMARKS

An architectural element must stand in place and in time linked to the given region and location. Sometimes deconstructivism architecture have done nothing to do with the set up region's history or culture. Being pieces of a globalized world they only represent a form's aesthetic without remembering the history and culture of the place where they are built. Another phenomenon to mention is that they are normally built on places where ancient buildings are demolished. A combination of the above phenomena brings a repulsion sense to the public who sees and judges the fruits of architecture. The buildings have to fit with the style of the region by being humble, sensible and elegant towards traditional values. The problem becomes even more complicated when the building represents the national most interests. On the other hand, the new buildings shouldn't be rise near historical sites to completely break the traditional thousand year old architectural style of the public buildings. It shouldn't look like a Burj Dubai next to the Egyptian Pyramids.

5 DECLARATIONS

5.1 Competing interests

The author declares no financial or non-financial competing interests.

5.2 Acknowledgements

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