An Evaluation of the Morphological Approach of Deconstructivist Pioneer Architects Through Interior Spaces

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We certify that we have read this thesis and that in our opinion it is fully adequate in scope and quality as a thesis for the degree of Master of Science in Interior Architecture.

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ABSTRACT

Among the first engagement by humans is the profession of architecture, and has been the mirror of various layers of human accomplishments, hence, architecture is more than a physical art, it is more of human art, in which any variable that affects human is reflected in the profession of architecture. The obvious evidence of the interrelation between architecture and man is known through sciences like philosophy, psychology, and sociology, which is also on-going. Philosophy, in particular, has been utilized to reflect notions, which is concretized in architecture. Thus, the translation of philosophy to architecture introduced by the philosopher Jacques Derrida, and developed by architects, have provided a medium in which the notion of deconstructivist architects can denote their notions.

Therefore, the focus of this thesis is to deliberate on morphological approaches for the deconstructive interior spaces, which have been deconstructed and procreated by deconstructivist architects. The main aim of this thesis is to provide a tangible base of the morphological approaches of the deconstructivist architect through an interior space. This was to answer the research question which is "How are deconstructivist architects representing their ideas in an objective way through the architectural morphology of interior spaces?". The bases of this thesis are adopted and evaluated through six case studies from the various projects (buildings, building complex) from key deconstructivist architects (Peter Eisenman, Bernard Tschumi, and Daniel Libeskind) that denoted various strategies of deconstructivism.

A multi-qualitative research methodology is employed in the thesis., three approaches were used through the study, which is descriptive, exploratory, and evaluative approach and also a critical literature review on these topics; Philosophy of Deconstruction, Deconstructivism architecture, Architectural Morphology of Interior space, Forming Operations.

The results of this dissertation clarify that there is no obvious materialistic morphological approach through deconstructing the interior spaces by selected deconstructivist architects to pursue movement by space designer candidates. Yet, the deconstructivist architects have utilized several conventional form operations, either consciously or unconsciously, owing to representing a notion of deconstructivism characteristics neatly profound within a space. The criteria of this study would serve as a platform for further researches concerning the architectural morphology whether internal and external of deconstructivist spaces.

Keywords: Philosophy of Deconstruction, Deconstructivism Architecture, Morphological Approaches, Architectural Morphology of Interior space, Forming Operations. İnsanların ilk işlerinden biriside mimarlık mesleğidir ve çeşitli başarılarının da aynası olmuştur, bu yüzdendir ki mimarlık fiziksel bir sanattan daha fazlası olup esasen insanı etkileyen herhangi bir değişkenin yansıtıldığı insanlık sanatıdır. Mimarlık ve insan arasındaki ilişkinin açık ispatı felsefe, psikoloji ve sosyoloji gibi bilimler üzerinden bilinmektedir. Özellikle felsefe, mimaride somutlaştırılan kavramları yansıtmak için kullanılmıştır. Bu nedenle, Fransız felsefeci Jacques Derrida'nın tanıttığı ve diğer mimarlar tarafından geliştirilen felsefenin mimarlığa dönüştürümü, dekonstrüktivist mimarların kendi kavramlarını ifade edebildikleri bir ortam sağlamıştır. Bu tezin odak noktası dekonstrüktivist mimarlar tarafından tasarlanan ve hayat verilen dekonstrüktif iç mekanların morfolojik yaklaşımları üzerinde durmaktır.

Tezin esas amacı, dekonstrüktivist mimarların iç mekan üzerinden morfolojik yaklaşımlarının somut bir zeminini sağlamaktır. Bu "dekonstrüktivist mimarlar iç mekan morfolojisini kullanarak nasıl fikirlerini tarafsız bir sekilde yansıtmaktadırlar? " olan araştırma sorusunu cevaplamak için önemli dekonstrüktivist mimarların (Peter Eisenman, Bernard Tschumi ve Daniel Libeskind) çeşitli dekonstrüktivizm stratejilerinin ifade edildiği projelerden oluşan (binalar, bina kompleksleri) altı örnek çalışmayı (Wexner Sanat Merkezi, Galiçya Kültür Şehri, Parc de la Villette, Alesia Müzesi. Berlin Yahudi Müzesi ve Askeri Tarih Müzesi) esas alarak değerlendirmektedir. Bu tezin amacına ulaşmak için, betimleyici, keşifçi ve değerlendirici olmak üzere üç yaklaşımın oluşturduğu çoklu-kalitatif araştırma yöntemi uygulanmıştır. Ayrıca, dekonstrüksiyon felsefesi, dekonstrüktivizm

V

mimarlığı, iç mekanın mimari morfolojisi ve biçimlendirme işlemleri hakkında literatür taraması yapılmıştır.

Bu tezin sonuçları, mimarlık öğrencilerinin iç mekanları inşa ederken seçilen dekonstrüktürivist mimarları takip eden belirgin bir materyalist morfolojik yaklaşım olmadığına açıklık getirmiştir. Şimdiye kadar onların çeşitli geleneksel biçim kullanmalarını bilinçli veya bilinçsiz olarak mekan içine işleyen dekonstrüktrüvizm karakterlerini gösterdiği kavrama borçludur. Bu çalışmanın kriterleri, dekonstrüktivist mekanların iç ve dış mimari morfolojisiyle alakalı olarak ileriki araştırmalara bir platform olarak sunulmasıdır.

Anahtar Kelimeler: Dekonstrüksiyonun felsefesi, Dekonstrüktivizm mimarlığı, Morfolojik yaklaşımlar, İç mekanın mimari morfolojisi, Biçimlendirme işlemleri

DEDICATION

All praise and thanks to Allah who blessed me with a wonderful father, affectionate mother, great & angle sisters Suhad, Ahlam and Maram, warm brothers, my love Abdulrahman "Dahoom" & Noor "Bulbul".

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Chapter 1

INTRODUCTION

1.1Background to the Study

The profession of architecture is among the first endeavour of the human race, and has seen humans through various stratus of advancements, besides the developments of human life have been reflected by it, changed as he changed, which had inflected humanity. Moreover, many factors have influenced both humans and architecture such as tradition, sociality, intellect, customs, politic, linguistic. Architecture exceeds the physical art, it is not just blocks and some materials, it is a humane art. Hence, any present ideas or principles are reflected in a certain society. The designing in architecture is similar to writing in linguistics, one can comprehend a social intellectual by reading their architectural structure, that gives premier thoughts of the interrelation of a social and architecture (Hoteit & Fares, 2014).

Accordingly, the interrelatedness between architecture and man significantly proved that the interaction between them is ongoing, and supported by sciences like philosophy, psychology, and sociology. Particularly, the philosophical intellect has always impacted the architecture over several periods. Thus, architecture is employed by the philosophy in order to represent its notions, despite philosophy's utilization by architecture, it also generates an existence profound to transcending the physical matter (Wigley, 1993). However, this research study explores the interrelation of the philosophy of deconstruction and architecture, in order to have a thorough comprehension of deconstructive architecture. Without diving into the philosophy of deconstruction, one may not be able to fully comprehend the architectural morphology of deconstructivism, and the fundamental domains and terms tackled by its philosophy, which are considered as the principles of deconstruction by the French philosopher Jacques Derrida.

The French philosopher Jacques Derrida in 1962, began to work on deconstruction philosophy in his book Origin of Geometry (Powell, 2006), after five years it got reverberation among intellectuals and philosophers. However, Derrida's philosophy of deconstruction cannot be examined from a conventional point because it is extremely difficult, and also seen as a growing structural occurrence with perpetual relegation od structure. also might be comprehendible from Heidegger's statement that there is no secure spot to begin (Wigley, 1993). Correspondingly, Derrida gently avoid providing a specific answer about deconstruction's origin, in an interview for him, he declared that one of the deconstruction's gestures is not to make what is not initially natural as natural, in other words, it does not naturalize what is artificial, likewise, he refuses to assume that what is constrained by social, institution, or history is a natural. Equally, his argument via deconstruction is that the notion of whatever is a human-made will never be natural, for instance, the philosophy or architecture is produced by a human (Derrida, 2008).

Furthermore, the philosophy of Derrida stands on dismantling and breaking down all conventional principles of the architectural form. Thereby, there is no definition that might reflect the vagueness and the level of the nature of deconstruction's uniqueness.

Well, as stated by Derrida, Deconstruction is an endless and ongoing displacement of the structure, it is not a strategy, method, nor a critique. It shifts quite accurately towards not a precise destination (Wigley, 1996).

A collaboration of Derrida and some architects towards integrating the philosophy of deconstruction into architecture, for instance, Peter Eisenman one of the prominent deconstructivists, who was leading the integration which was accompanied by the French philosopher. However, the cooperation between Tschumi with Derrida towards collaborating for the project of the park which also included Eisenman. The appreciation of Eisenman as an architect and theorist as well led him to participate in reverberating the term of deconstruction in philosophy to be deconstructivism architecture, besides his facilitation of clarifying, expanding, and smoothing the way of the core notions of deconstruction. Architecture is a language for Derrida and Eisenman, it is about dissemination and meaning, from this point of view architecture could be clarified through utilizing the concepts of deconstruction, as the locus or the context as a place of presence.

Deconstructivism initially represented in the MoMA exhibition in the 1980s, through the participated architects' works which had the discourse of deconstruction postulated in their projects. This exhibition organized by Johnson & Wigley, they invited a number of architects, for instance, *Peter Eisenman, Bernard Tschumi, Daniel Libeskind, Frank Gehry, Rem Koolhas, Zaha Hadid, Coop Hemmelbue, and among others* displayed their works of deconstructivism in the Museum of Modern Art. Meanwhile, this master thesis presents results for a broader evaluation of the three prominence approaches among deconstructivist architects through interior public spaces, thus, these evaluative exploratory criteria are applicable to be elaborated by other authors through studying the morphological approaches of any other deconstructivist architects.

1.2 Problem Statement

The laboriousness of understanding the morphological approaches within interior forms for such architects, many interior architects and students miscomprehend or even struggles to receive the deconstructive thoughts within a space, the reason beyond that, those deconstructivist architects have nor an obvious strategy or a clear morphological approach to follow it in design (Salingaros & Masden, 2007). However, the gap of this research has various aspects, for instance, several studies have been carried out on the architectural morphology of deconstructivism through an aspect, which is quite philosophically 'subjective' researches of translated philosophy of deconstruction and its impacts on the architects' thinking, for instance, (*The Translation of Architecture, the Production of Babel*, by Wigley, 1989), and (*Deconstructivism: Translation from Philosophy to Architecture*, by Hoteit, 2015). Therefore, it needs more an 'objective' translated research study in order to provide a tangible platform, so one could smoothly comprehend such approaches of architectural morphologies through interior spaces.

1.3 Research Question

How are deconstructivist architects representing their ideas in an objective way through the architectural morphology of interior spaces?

1.4 The Aim of the Study

According to the problem statement that identifies a gap in the academic field about the architectural morphology of deconstructivism within the internal spaces; the aim of the thesis is to provide a tangible base of the morphological approaches of the deconstructivist architect through an interior space.

1.5 Methodology

In parallel with the research aim and question, this study's methodology would be classified into three main sections; First, reviewing the literature through the accessible article, journals, books, websites, and any relevant materials; a describing through reviewing the literature related to deconstruction (origins, philosophy, definition, principles, key-terms), and deconstructivism (translation, aspects, philosophical stand view, characteristics), that helps to provide a base to fulfill the aim of the research. Then, an exploratory research methodology is employed in this study within the theoretical background of the study, and ongoing through the next part of cases analysis, thereby, with this section, an evaluative research method is hailed by the author in order to find out the morphological approach of deconstructivism pioneers is embodied in interior spaces.

1.6 The Definition of Key-Term

Morphology

Mor-phol-o-gy: studying the form of something or its structure (Merriam-Webster Unabridged).

According to Aronoff & Fudeman (2011), the term of 'Morphology' referred by a German philosopher Johann Goethe (1749-1832), coined it at the beginning of the 19th century through a biological context. Originally it comes from Greek; 'morph' means 'form', thus, morphology is an examination of the form and study its structure.

However, the term morphology has utilized in several sectors, for instance, it refers to studying the form of organisms and its structure, whereas in geology refers to examining the configuration of landforms, moreover, morphology refers to studying the internal structure and the approaches of configuring the words' forming in linguistics (Aronoff & Fudeman, 2011).

Steadman in his book Architectural Morphology (1983), determines the term morphology as 'architectural linguistics', and he claimed that there are two sectors of 'morphology' itself, one part deals with syntax of space and the architectural forms, while the other part deals with the connotations, the meaning's systems which supported by syntactically forms and its internal structure.

1.7 The Structure of the Thesis

The following chart explains the procedure of the study research; the essential subjects and relevant sub-subjects are illustrated for a strategically organized thesis.

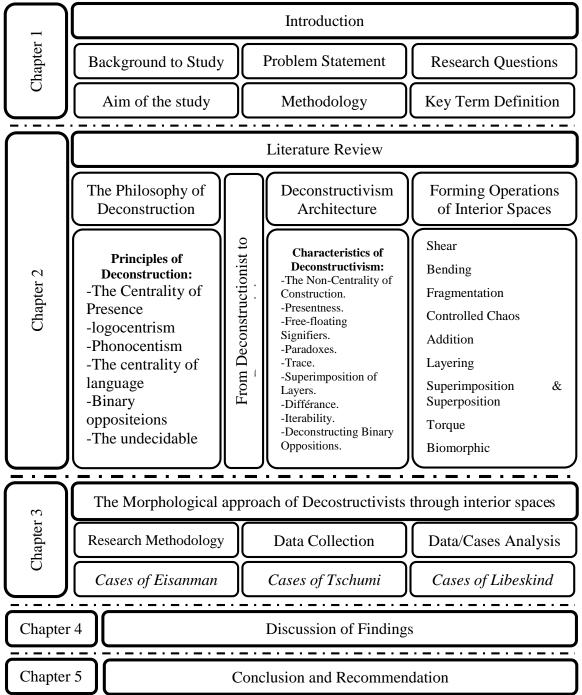


Table 1: The structure of the thesis.

Chapter 2

THEORETICAL BACKGROUND OF THE STUDY

Hinging on the discourse of this thesis that has to do with Deconstructivist architectural form with the interaction of the indoor morphological approaches by evaluating the architectural form operations are employed to be able to configure the deconstructivist form of interior spaces. In order to be critical about this evaluation, a theoretical background toward the analysis of the subsequence chapter would be provided; a critical literature review that examined various researches in articles, journals, theses and books that dealt with the discourse profoundly. The theoretical background of this chapter also thrives towards throwing more illumination into the discourse of deconstructivist architecture, which is moving the field from a subjective approach (covered by most studies) to be a more objective approach since one struggles to understand the morphological approach of it. In order to achieve that, the root of deconstructivism architecture would be looked into critically, which would be followed by how it was transferred to the field of architecture which would also involve the personalities concerned.

Consequently, the journey starts with a rummaging through the history of deconstruction philosophy of Jacque Derrida in this chapter, in order to comprehend the translation of the philosophy of deconstruction as a deconstructivism in architecture. However, most forming of Interior Architectural Morphology elaborated in the architectural form which seems to be approached through the deconstructivist

morphology. Subsequently, finalizing the chapter by highlighted prominent architects of the deconstructivism that assumed to be selected in this thesis.

2.1 Philosophy of Deconstruction

In people's thoughts, context is made-up of clips of memory, thereby possessing the configuration of the memory of a place. Taking the lead from phenomenological philosophy, Jacques Derrida announced the deconstruction concept, in "De La Grammatologie (1967)", which is one of the earliest books, the book was responsible for Derrida renown and also became the basic literature of deconstruction criticism, with the aim of examining the dominant conceptual differences in the field of contemporary philosophy. Deconstruction was coined in the 1960s, as a school of philosophy, social sciences and literary criticism, it is also known as post-structuralism. Derrida's work on deconstruction was inspired by the works of Heidegger and his view of **Destruktion** and his techniques of Abbau, in addition to the works of Husserl with phenomenologies (unbuilding or dismantling), during deconstructing them thoughts and texts, his works also influenced by the structuralism of Saussure (Hoteit, Derrida, & Eisenman, P. 2015).

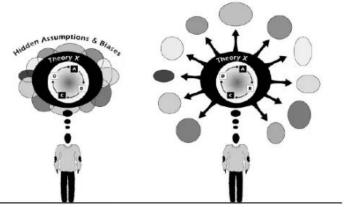


Figure 1: Deconstruction's thinking. (URL.1)

The concept of deconstruction has been employed in various fields of study from architecture, to art, feminism, science, mathematics, political theory, theology, historiography, anthropology, film theory, psychology and not limited to philosophy. However, Derrida that coined this concept stated that his main focus in the utilization of the concept is in the field of literature even before the field of philosophy (Derrida, 1998).



Figure 2: Michael Mapes, deconstruction art, (2014). A fragmentation arranged the life of a person, so as to recreate the visage of a human. (URL 2)

In the trenchant intellectual discourse of the late 20th century, deconstruction was often used critically to denote cynicism of Nietzsche, facetious doubt. The prevalent utilization of the concept has been made to denote the tremendous dismantling of conventional modes of thought (Derrida, 1988). Hoteit (2015) stress that deconstruction thrives for dismantling the metaphysics of westerns, which is built on defined and inimitable beliefs. In line with this statement, Derrida reputed every defined view of the western philosophical convention, starting from the defined views of Plato. Turner (2016) asserted that deconstruction is not a process or an action, but it is the phenomena that occur, a phenomena that happen, which does not require pondering in any sort, but it is latent occurs within the structural meaning of deconstruction. Its penchant is to throw light into structures and showing the avenues in which our comprehension of the basics of the concepts is configured. She went forward to suggest that the possibility of deconstruction occurs within the system of meaning itself, within the system of 'differánce', which is mainly concerned with the comprehension of notion or ideas, and not with their application. This goes to say that it is about the internal part of meaning itself without depending on the exterior characteristics, thereby exploring and showcasing the internal logic of the notions of meaning.

2.1.1 The French Philosopher Jacques Derrida

According to Doris (2001), Derrida's work can be said to be difficult to comprehend, he provides his clarification in a prolonged manner, with even quotation mentioned by him being lengthier. The difficulties of his work are reinforced because questions of text-book philosophy are not provided with a specific answer. He performs critical analysis on a particular subject within the context of a micro level, without giving generalized comments on any particular issue, which makes him dissect the problem and the various units of the problem are spread out.

Derrida picked the term "deconstruction" as a substitute to Heidegger's "destruction" and "abbou", that shows the various techniques which act on the "structure" of the concept of western philosophy. Derrida's deconstruction does not denote demolition, which has connotations of negativity; this made Derrida not to use the French word "destruction", which is relative to Nietzsche's demolition (Derrida, 1988). His approach breakdown the residual layers in order to show what is inside it before it reconfigured it again. Derrida rejects Unitarian and infinite concepts, by using negation in place of affirmation, thereby planting seeds of doubt in all unit of evidence and still goes to dismantle them all.

Derrida thrives at questioning all texts that related to single and final signifiers, by creating a philosophical and critical practice. Derrida uses text to refer to any significant institutional structure whether social, economic covering all that this intellectual and cultural or any phenomena would remain liable to deconstruction (Derrida, 2001).

According to Derrida, deconstruction cannot be seen as an analysis. A system or either criticism, but in reading as a method or a strategy. It is a strategy which dismantles what was present and carries what was no there to what is thereby deferring it an absence. It deals with literary texts as a notion or idea that is not related and possesses deconstruction agents (Derrida, 1978). Self-deconstruction is achieved according to Derrida (1978) by the strategy that involves pinpointing contradiction and tension by which the text is to be analyzed. He went further to state that the first level of

deconstruction of text is for jiggling the concept of binary oppositions and dismantle the metaphysics rationale of them. Yet, the actions do not entail switching the places of these dualities or giving one a higher preference than the other, nor those it neither means combining the dualities together or skipping them. Binary opposition according to Derrida does not have a preference, which allows the text to be open to several meanings and interpretations (Derrida, 1976). However, Derrida (2011) asserts that despite the concepts of deconstruction having the same origin, their approaches are not the same.

Therefore, Derrida's philosophy can be defined as possessing dynamic significances from a story, which means that they do not have a single meaning, making work to have various factors that are not clarified (Mumcu, 1995).

Thus deconstruction is not a synthetic tool but a critical tool; it does not demolish the subject. Deconstruction does not exist within the text, it does not affect itself and still takes action upon all text, yet deconstruction is not seen as complete or finishes, but a continuous process "a living philosophy" which is being able to change itself, in which at that point is still self-critical and continuously deconstructing its own affirmation.

2.1.2 The Most Significant Domains of Deconstruction

In order to deconstruct the fixed and established believes of western philosophical metaphysics, Derrida was consumed with belittling the contrasting attitude that has affected so much of the western philosophical norm, he achieved this deconstruction by dealing with the domains critical to the concept of deconstruction (Hotiet, 2015). These domains tackled by deconstruction, which are;

- The Centrality of Presence
- logocentrism

- Phonocentism
- The centrality of language
- Binary oppositions
- The undecidables

The Centrality of Presence

Western metaphysics has always been built on centrality of presence, even from the time of Plato and Hegel. Heidegger (1962) went on to state that "the determination of Being as a presence in all the senses of the word". In western metaphysic only this defining moment exists, leaving the future and the past as absent, this is so because the future is yet to come and the past is gone, so it can be said that presence clarifies and possesses now (Derrida, 1972). The concept of centrality or presence is rejected by Derrida because the past and the future are hinged on the existence of presence (Munawar, 1996). Derrida's rejection was also about his believes in relation to the philosophy of absence that eventually relates to the involvement of the existence of the part of about self that is unconscious, known as the subconscious. This unconscious self is vital to the sensitivity of awareness, it is the absence's remembrance and failing to recall. The aim of Derrida for the domain of centrality of presence is to dismantle the basic idea of the concept by not placing absence above presence, but still attaching absence to presence, he went further to state that there is no complete presence or complete absence, in all, there is a "trace". Trace which is a remnant of the former experience is found in all present (Derrida, 1995).

Logocentrism

Logocentrism is another domain of western metaphysics that is tackled by deconstruction, "logo" has its origin from the Greek word while means the presence

of authority or peripheral center that provides authenticity to patterns, views, and expressions; here this authority is undisputed and self-evident. Therefore, western philosophy assumed that the existence of a structure comprises a center. This center facilitates existence and the world cannot be comprehended without it. Consequently, Derrida (1976) stated that the center cannot be evaluated without finding the center of another relation, this relation involves the operation in which the central spot is situated or replaced with a unit as the opposite, which is best described as supplementing and substituting.

Phonocentrism

This a domain of western metaphysics that involves the placing of speech above writing due to the speaker is right here with the listener, thereby providing the opportunity for the speaker not to be misunderstood (Gross, 1986). While the writer makes his words known as paper thereby separating these words from him, this makes the meaning of the writing to be open to various explanations by the readers. This has resulted in the marginalization of writing by western philosophy because these various explanations can to the loss of the authentic meaning of the write-up. So writing was taken to be inferior to speech. Derrida tries to dismantle Phonocentrism by employing the concept of "difference".

The centrality of language

A sign can be defined as the combination of a concept, a signified and a sound image. The significance of the word, the standing point is a random connection between the signified and the signifier (Saussure, 2002). Saussure (2002) went further to give an instance in which there is no link between the cord of echoes 's-i-s-t-e-r', which is the signifier and the concept of the word "sister", that is said that the meaning of the sister can be explained using as cords of sound provided by other languages. Saussure (2002) stated that the signified not able to be distinguished through the signifier in the scope of morphological. Deconstruction thrives to deconstruct the notion of any symbols and to reject duo signified and signifier which is well-grounded in the philosophy of westerns. Furthermore, iteration is permitted by elements of sign (the signified and the signifier) that partake in a constant free plan, which establishes a fresh sign by writing in a text. This results in the destabilization of the texts in which through iteration of writing in several educational symbols establishes fresh different significances in addition to several possibilities. So the text becomes prone to numerous interpretations (Guillemelle & Cossette, 2006).

Binary oppositions

Binary opposition is deeply trenched in western philosophy norms. Man/woman, good/bad, presence/absence, speech/writing, indoor/outdoor and signified/signifier are instances of binary oppositions. The first units of this duo have always been preferred than the other (Graves, 1998). Deconstruction thrives to dismantle them (binary dualism) without favoring one unit above the other by stating certainly of the tentative hesitant (Alzain, 2002).

The difficulty of the center is that it thrives to omit everything other than itself, this results in the creation of "binary opposition", in which the center downgrades others. The favored and marginalizes the dichotomy created by this process are seen in binary opposition (Hotiet, 2015).

The undecidables

Some concepts for the comprehension of deconstruction cannot be denoted as conviction or facts. These concepts denotations continue as undecidables, this is because each of these concepts can currently process multiple and diverse implications (Hepburn, 1999). These undecidables signifies a framework (Derrida, 1978). Due to this framework, is fully intangible and cannot be seen, like difference, dissemination, trace, and supplement.

Deconstruction is a special strategy in the world of the philosophical and literary process. Deconstruction rejects ready established literary, linguistic and intellectual codes by critically evaluating the fundamental structure on which they were built. The various domains of deconstruction attempt to deconstruct these concepts in order in order to dismantle the significance of the center, relocate the suppressed, which pushes it closer to the surface, without giving preference to the center, margin or surface (Hotiet, 2015).

Some of this domain transfer to architecture in the concepts of deconstructivism by Peter Eisenman who was inspired by the works of Derrida. These would be discussed in the following section.

2.2 From Deconstructionist Philosophy to Deconstructivist Architecture; the Characteristics of Deconstructivism

Architecture is concurrently a structural metaphor in showcasing several techniques of thinking in addition to philosophical thought (Nilsson, 2004). The relation among architecture and philosophy became well known by Derrida's collaboration with architects like Eisenman and Tschumi in the design of the project of "Parc De La

Villette in 1982 and also in Derrida's literature (Hotiet, 2105). The reality of Eisenman been a theorist and also as an architect contributed to the translation from the philosophical deconstruction to be as an architectural deconstructivism, besides Peter Eisenman had facilitated in whether clarification and expansion of the deconstruction's core concepts. They were keener on the issues relating to the symbolism of presence and absence in architecture by the concept of solid and void. Deconstructivist architects and Derrida consider architecture as a language of dissemination and meaning, that is architecture can be clarified by using concepts of deconstruction, with place presence as the locus.

In the 1980s that has when deconstructivism was initially used to represent a style of architecture, which is personified within architects' designs. These architects' projects were postulated off the notions of the discourse philosophy of the deconstruction, specifically in 1988, an exhibition organized by Philip Johnson and Mark Wigley in the museum of Modern Art. Frank Gehry, Bernard Tschumi, Zaha Hadid, Rem Koolhas, Peter Eisenman, Coop Hemmelbue and Daniel Libeskind showcased their works of deconstructivism in the exhibition. The organizer Mark Wigely selected works that bothered and deconstructed the notion of the whole and clean arrangement and he described these works towards architectural deconstructivism (Stouhi, 2018).

There are many conflicting views on the benchmarks utilized to specify a work as deconstructivist architecture. There are no obvious benchmarks to classify a project as deconstructive architecture. This is supported by Derrida in his text (1986) He states that it is not just a method of an architect that has the knowledge on how to dismantle what was assembled, but a questioning which affects the methods itself, in which the authority of the architecture and therefore creating its own architectural rhetoric. But Wigely (1993) in contrast Derrida's view delineates deconstructive architects as the one who traces the integral predicaments within the buildings, structural issues, in which the form is factually questioned and the one that deconstructs buildings. However, Hotiet (2015) stated that curvilinear and complicated form cannot classify a project as deconstructive. However deconstructive projects might initially denote fragmentation and not having visual logic. Still, these fragments are brought together by the strategies and concepts of deconstruction.

Thus confrontational architectural project that seems to separate the structure, might be as modestly breaking of elements or advance concealment of elements into a configuration of traces, can be said to be deconstructive. These approaches have created some of the most challenging works of recent times, but there are still replications of deconstructive projects in other fields of disciplines because the projects do not take advantage of the special requirement of the architectural elements. The concept of deconstruction is not flattering (demolition) or disguising. Deconstructive approaches probe structural flaws within a building that is known to be stable, to the opposite deconstruction achieves all its power by questioning the fundamental value of unity, stability, and harmony, thereby providing a different perception of structure; that perception that flaws are essential to the structure.

The very rooted regulations of composition that is a ranking affiliation between formal elements to produce a cohesive sum and which is stable are the traditions that been broken due to challenges of Russian Avante-garde. Contaminated forms were generated from a pure form. Abnormal forms of organic design and distorted angle and iterative results, where are the unfamiliar world of familiar elements; these ideas are important to comprehend the characteristics of deconstructivism (Johnson and Wigley, 2005).

As stated an early deconstruction is a special approach in literary and philosophical methodologies. Deconstruction is strongly against structuralism, deconstruction rejects established rules of literary, intellectual and linguistics, by probing the fundamental structure on which they are built. Deconstruction evaluates a large number of several structures in literature, while structuralism promotes the identification of a core structure of particular literature, therefore deconstruction is not controlled by any particular approach, because it is an adaptable and manageable approach, thereby not being a method (Derrida, 1988).

Deconstructivist architecture entails the deconstructing well-rooted regulation of geometric strategies like harmony, unity, compatibility, and stability, with the distortion of the relationship among interior and exterior in a similar way western philosophy. According to Derrida, an architect needs to probe all the traditional strategies and basics in architectural design like vertical and horizontal lines, stability, he suggests the dismantling of more old concepts to create space for new forms. Below are the various concepts or characteristics of deconstructivism, which are:

- Non-centrality of construction
- Presentness
- Free-floating Signifiers
- Paradoxes
- Trace
- Superimposition of layers
- Difference

- Iterability
- Deconstructing Binary opposition

These characteristics were translated and developed from the domains that tackled by the philosophy of deconstruction through a collaboration of Derrida and architects such Eisenman and Tschumi, in order to be applicable to use them as architectural deconstructivist strategies.

2.2.1 The Non-Centrality of Construction

A center that is obvious is not available in deconstructive architecture, this is because a defined center or a defined margin does not exist, and thereby center can take the place of margin and also the other way round. However, this denotes Derrida's position on deconstructing western centrality.

2.2.2 Presentness

Deconstructivist architects focus more on the presence of the metaphysical thoughts. Eisenman (2004) quoted Derrida by saying, "Architecture is a locus of the metaphysic of presence". Derrida and Eisenman have a strong conviction that presence is the place of architecture. Thus, the concept of deconstruction tries to deconstruct the debate relating to absence and presence which are seen in architecture (Figure 3) the Guardiola House project explains the refuting of any architectural compatibility.



Figure 3: Guardiola House, Spain, 1988, by Peter Eisenman. (URL 3)

Eisenman and Libeskind asserted that by the significant presence of the signified, architecture is overcome by the present. Peter Eisenman went further to provide an instance with this statement "in architecture, there is no such thing as the sign of the column or window without the actual presence of the column". Therefore, distinguishing the signifier from the signified is the job of the deconstructive architect. An example of each architect of their projects, Berlin Memorial by Eisenman, and National Holocaust (Figures, 4 & 5), they intended to represent the past through the present of the project to provide an immortal memory for future.



Figure 4: Berlin Memorial to The Murdered Jews of Europe, Berlin, Germany, 1995-2005. (URL 4)



Figure 5: National Holocaust Monument, Ottawa, Canada, 2017. (URL 5)

2.2.3 Free-floating Signifiers

A wall, for instance, can possess the function of being a wall and it's significant of being a wall, so also a column could be vertical element that denoted construction; however, these instances represent Derrida's position in which he asserted that signifiers can be separated from the signified also the element from the sign. The concept has been adapted by numerous deconstructivist architects such as Eisenman, Tschumi, and Libeskind. Their project seems to be enigmatic and unfathomable when the concept is employed. The users of the building are intended by the architects to experience a sense of confusion through the simulation of a particular feel. Whereas several projects hailed this strategy of deconstructivist architecture, for instance, House VI (Figure 6), is an instance of where this concept was employed by Peter Eisenman to promote the emotion of unfathomability, meaninglessness, and alienation (Eisenman, 2002).



Figure 6: HOUSE VI, Cornwall, Connecticut, by Peter Eisenman. An interior space reflects the strategy of free-floating signifiers, represented as a structural element. (URL 6)

2.2.4 Paradoxes

The important part played by paradoxes in deconstructivism, is that it involves the addition of many paradoxes to deconstruct binary oppositions, due to its probing of different ranks and dualities. One is under the effect of paradoxical experience when they experience incompleteness of a completed structure. There is always 'Ana' absent, but presence is not absolute, this experience eventually leads to suspicion. This notion denotes the philosophy of deconstruction's conviction that there is nothing that fixed, which is every single thing is subjected to judgment. An example of where this

concept is employed in some projects of Eisenman, Tschumi, and Libeskind. Such as House III of Eisenman (Figure 7)



Figure 7: HOUSE III, Lakeville, Connecticut, 1971, By Peter Eisenman. The structural elements of the house might reverberate the concept of paradoxes. (URL 7)

2.2.5 Trace

Eisenman in the concept of trace reflects the discussion of presence. He views trace in building design as a basic and essential factor. According to Derrida, nothing is the complete presence or completely absent. Thus the trace of absence and presence are always present. Therefore, it is the duty of the architects to always find the trace of a particular presence, which begins the process of designing. So that most of the deconstructivists' designs stated from the trace. In assertion, he was critical to the development strategy of physical traces that are remnants of the site. In addition, the discourse of trace is also buttressed by Daniel Libeskind when he states that all projects possess a trace, in which each project possesses a fresh place and fresh people, but would not begin from nothing. It could be a trace of dreams, symbols, and stories. For instance, Libeskind employs architecture to till a story. Furthermore, every person, scheme, and site has a story. A building can become pieces of concrete, metal, glass, and baton, if it does not have a story, the architect has to critically listen, because the architect is not the writer of the story (Belogolovsky, 2011). An example of where the trace is employed is the Jewish Museum in Berlin. The architect's intention to move the users' views to trace, the utilization of trace is fundamental to design and not just to generate special, not to generate special, non-tradition architecture (Hotiet, 2015).

2.2.6 Superimposition of Layers

Site is a center of possibilities, according to Eisenman, thus the site becomes his initial point when designing a project. He stated that sites are not just mere visual context or surrounding, he moved his attention to the archaeological and materialistic stratus of a specific site and the whole location in total, for example, Cannaregio Town Square project (Figure 8). According to Ansari (2013), the starting point is not the site, instead traces of the site.

The architects have to go deep into the recent past and far past in order to discover the trace, in order not to focus on particular elements and neglect others, superimposition of layers, which is seen in the city of culture of Galicia. However, not all strategies of superimposition are form adopting traces. According to Broadbent (1991), superimposition is one of the much-known strategies of deconstructivist architecture.

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He went on to state Mark Wigely statement in which he said superimposition leads to the referent to conventional unclear intersections among systems.

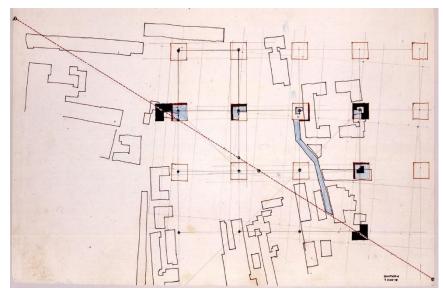


Figure 8: Cannaregio Town Square, Venice, Italy, 1978, By Eisenman. (URL 8)

2.2.7 Différance

The concepts of deconstructivist philosophy that is achieved by arranging structure which can present individually, a structure that refutes the single supposition of usual relation among program and the resultant, a structure that does not have a center or hierarchy. Differance is also one of the concepts of deconstructivist philosophy which have been transferred to architecture. An example where this concept is employed is "Parc de La Villette" by Bernard Tschumi (Ibrahim, 2014).

2.2.8 Iterability

Deconstructivism designs have reiterated sign and architectural elements more time, adhering to the concepts of iterability transferred to architecture, in which his element possesses several explanations and functions depending on its context. This concept was also utilized Parc de la Villette through iteration of follies (Ibrahim, 2014).

2.2.9 Deconstructing Binary Oppositions

Various deconstructivist architects have contributed to the translation of the concept of deconstruction of binary opposition to architecture which is a central strategy of the deconstructive philosophy. The concept comprises dismantling the principle of interconnection, cause/effect, which was at the result by deconstructing the relation among others. This strategy was utilized in Parc de la Villette through the use of follies to dismantle the link between program and form bearing in mind that the program is continuously adapting (Hotiet, 2015).

Domains Tackled by Deconstruction	Characteristics of Deconstructivism
The Centrality of Presence	Non-centrality of construction
	Presentness
logocentrism	Free-floating Signifiers
Phonocentism	Paradoxes
The centrality of language	Trace
Binary oppositions	Superimposition of layers
	Difference
The undecidables	Iterability
	Deconstructing Binary opposition

Table 2: The subjectively translation of the architectural morphology of deconstructivism.

2.3 Forming Operations of Interior Architectural Morphology

After the discourse of the philosophy of deconstruction, domains of deconstruction and even the transfer of the philosophy of the deconstruction to architecture; known as deconstructivist architecture, it would be important to discuss traditional architectural formal languages. This section would focus on architectural formal language.

In practical terms, architectural formal languages can be categorized into two; which are grammar and vocabulary. The former grammar can be said to be a resolution that controls how elements are organized in a space or a combination of guidelines that symbolize compositional strategies. While the later vocabulary is composed of a special set of elements (Krier, 1988). However, buildings can be seen as a collection of design elements, either basic or collected into constituents, organized in thoughtful geometrical relationships (these languages have a basic formal rationale which is guided by configurational principles).

Due to the linguistical nature of the design in architecture, the comprehension of one building or collecting of buildings rational form that might have been extracted from guidelines of related principle (Eisenman 1984). In addition, rational forms have also aided in what an architect offer on the request of the client, how the request of the client leads to a specific type of building. The awareness of the rational form has aided in linking specific buildings to a feeling of potential and creativity. However, the architectural morphology operations, which are carefully selected within this study in order to support the objective translation as well as the evaluation phase of this research, therefore, this part has been developed based on several studies majorly on two books, (Forming and Centering, by Moffett, and Architecture Form, Space, & Order, by Ching), these operations are:

- Shear
- Bending
- Fragmentation
- Controlled Chaos
- Addition
- Layering
- Superimposition & Superposition
- Torque
- Biomorphic

2.3.1 Shear, Bending

Shear comprises the distortive impact of unconventionally differed forces which can be seen on plan or elevation and vary considerably in impact as a purpose of specific toughness of the structure and specified strength of the forces included.

Pei Hancock tower, bending/shearing are employed in the plan orientation of the project (Figure 9). An illogical alteration of the traditional rectangle was at first glance seen as parallelogram deformation. But at observing its closest context, the distortion of the trace can give the impression that the urbanistic "pressurization" at this approach to Copley square adjacent to Trinity church moving the volume backward into its slanted form, thereby exposing the empty triangular space in the process. Taking into consideration the larger context of the tower, part as the mediator among the grid arrangements of Back Bay and south end, which is now obvious, in which the tower is now looking as it has shifted away from the opposite side.

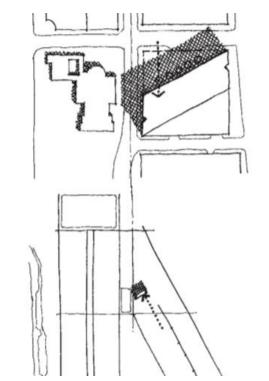


Figure 9: Master plan of Hancock Tower, 1976. (Moffett, 2017)

Shears are not only expressed in different groups of acute and obtuse corners as shown in Norman Foster's London City Hall (Figure 10). Which is both about prolate spheroids, but the broader city hall is considerably lending. The volume seems more to be in the process of shrinking, which is like an excuse for detailed of expression of ever-changing lateral deformation lateral forces are also changed, by which serial overhanging layers at the south function vigorously as integral shading.

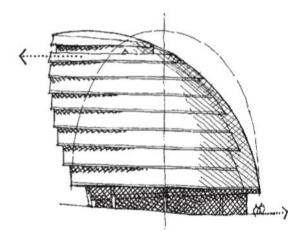


Figure 10: London City Hall, England, 2002. (Moffett, 2017)

A pattern of reoccurring bends, with harsh, less regular predictability, acute bends as divergent to fluid movement or right-angle turns.at the eye level jagged sequences of adjoining line segment lost to confusion, but striking and also bold of the Jewish Museum (Figure 11). The superimposition of the plan is shown by a series of linear voids, which are contrasting experiences in reality, in which the sense of order is not evoked, which is the intention. The project might suffer from the risk of banality is the bends persist again or reappear, making it become motif than apart, but bending can be a vital formative tool.

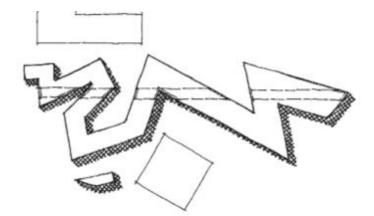


Figure 11: Jewish Museum, Berlin, 2001. (Moffett, 2017).

2.3.2 Fragmentation

Fragmentation can be seen as a technique of separating planes into units of smaller planes. The units of smaller planes are called fragments. Fragmentation can be categorized into three types; which are hybrid (union of horizontal and vertical), horizontal and vertical, moreover, horizontal can be divided into two methods, which are primary horizontal fragmentation and derived horizontal fragmentation (Aagaard, 2017).

Fragments are gotten in such a way that it allows them to be constructed to the original whole; this is required to assemble the original plane from units of fragment when required.

Bespoke fragments can appear to be more isolated or not complete part of a system, which is the nature of fragmentation, the fragments are in distinctive meaning, which does not give an entire overview. However, the building with fragmentation are not obstinate and distressing features, but act with complex geometrics which creates an awkward notion of displacement and leading an apparent low sense of order (Aagaard, 2017).

2.3.3 Controlled Chaos

When a typical mathematics expression finds it complicated to explain the order of geometry, it can be seen as chaos, which is denoted through forms and various configurations such as cinema center by Coop Himmelblau.(Figure 12). However, the creation of chaos theory has provided better clarification of complicated methods in architecture, by which architectural space is developed by design, also, to other procedures that assemble themselves (Rubinowicz, 2000).

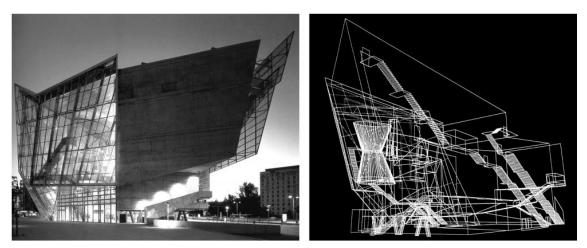


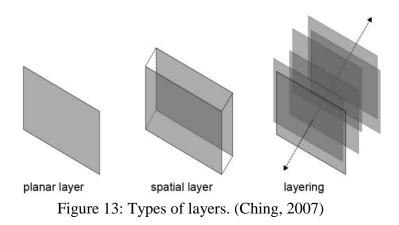
Figure 12: UFA Cinema Centre in Dresden, Germany, 1998, by Coop Himmelblau. (Moffett, 2017).

2.3.4 Addition

The addition is the central means of architectural formation, whereby bring together of function has provided parallel volumes or elements, these volumes or elements are assembled together by a multi-dimensional combination by a unit or group of similar types of additive approaches. In the 20th century, architecture was to be strongly influenced by the additive organization of vernacular townscapes and farm. However, due to the increase in population over time, modern-day decisions included bringing together distinct volumes which are intentional, which are total taking effect as design as a whole (Moffett, 2017).

2.3.5 Layering

In order to prevent the misinterpretation and for better clarification of the term "Layer" denote a thickness of the material or quantity or a sheet, specified one of numerous, covering a plane, surface or body. While "layered" can be said to be an organization of layers or a layer, also "layering" is the process of organizing elements in layers. From the clarification, it can be seen that layering is an act, while the layer is the substance. A layered expression can be seen from a linear point of view, where the action of layered originated from a directional vector started from a plane or point of reference. A reference point can be seen as a layer, which can be planar or spatial. The spatial layer possesses depth as the three dimensions, while the planar layer does not represent depth (Figure 13). The planar layer can be seen as a surface (Ching, 2007).



One of the experimental movements of postmodern space can be defined as "ambiguity" and layering, which can create multifaceted spatial layering and ambiguity, tilled axes and distorted figures in the 1970s (Figure 14).

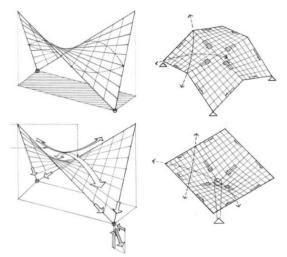


Figure 14: Distorted layers. (Ching, 2007)

2.3.6 Superimposition/Superposition

According to Cambridge Advanced Learner's Dictionary, superimposition can be seen as the placing of layers in space with locus to each of these layers. But superimposition is different from superposition, because superposition represents the intertwining of layers, meaning an overlap of several elements meaning an overlap of various elements. By proposing collaborations, two or several more layers can be superimposed there by defining several relations, which may result in numerous erratic relationship might rise up.

According to Harcus (2006) ceiling, planes, columns, floors which are abstract elements manipulated by the architects gives the opportunity to perceive the intersection. The superimposition provides the allowance for the viewer to view the association among several layers 'fragments' in order for the design procedures to be pursued because it is now possible to witness the interlocked fragments of both layers. Eisenman (1984) exemplifies in the most crystal way the definition of superimposition and superposition, which is mostly used in the place of the other as synonyms, but have contrasting impacts as operations, thus having contrasting relation among layers, so he went ahead to define superimposition as the parallel. The horizontal layering in the situation in which ground and figure are not consistent among one another, which stable and figure are not balanced, while superposition is the vertical layering contrasting between ground and figure. Tschumi (1996) mentioned that superposition as a key tool that he uses it in his designing works, whereas, superimposition is utilized as a conceptual tool, which compares events related to the function of space (Allen, 2001).

2.3.7 Torque

Torque is the capacity of a force to revolve an object ground a pivot, it can be said to be a twist that provides an appropriate class for the special formative sidebar, which has a contrasting meanly to structural engineers instead of bending. The exact meaning of the term freedom here has to involve examples that have concentric distortion-linear spirals (Figures, 15 and 16) (Ching, 2007; Moffett, 2017).

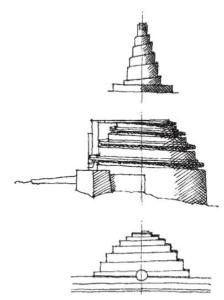


Figure 15: Great Minaret, Samarra, Iraq, 851 C.E. (Moffett, 2017)



Figure 16: 'The Twist' project, Norway, 2019. (URL 9)

2.3.8 Biomorphic

The all-inclusive aspects of biomorphic denote the complex nature of it, which has left the analogy of structural engineering; biomorphic cover a general class of deformation that focus on single elements, that have departed from geometric and organic purities. Mendelsohn's Einstein Tower (Figure 17), the building is an architectural masterpiece of expressionism of a stucco-clad, streamlined curvature, which is ahead of its time. The building looks like it's on a move. The physical fabric looks as if it has been windblown and also stretched out, giving it deformed fabric ideas of natural character are subjected backed by biomorphic architecture, which is an infinite source of incentive utilized as a mean of understanding humans. These include the fundamental notion of design inspiration, inspiration, an example of the application is the sea world in Lamongan, Indonesia.

Biomorphic architecture has a system that is similar to that of the natural environment and visible distinct shape, systems, and structure which are also similar to the natural sustaining systems. Biomorphic architecture also employed the use of local material and encourages the use of materials that utilizes light as form structures to reduce the issue of sustainability in architecture (Moffett, 2017).

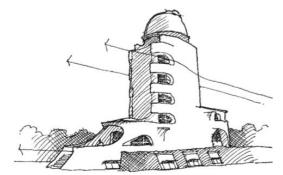


Figure 17: Einstein Tower, Germany, 1921. (Moffett, 2017)

Characteristics of Deconstructivism	Forming Operations of Interior Architectural Morphology								
Non-centrality of construction	Shear								
Presentness	Bending								
Free-floating Signifiers	Fragmentation								
Paradoxes	Controlled Chaos								
Trace	Addition								
Superimposition of layers	Layering								
Difference	Superimposition & Superposition								
Iterability	Torque								
Deconstructing Binary opposition	Biomorphic								

Table 3: The objectively translation of the architectural morphology of deconstructivism.

2.4 Background of Selected Deconstructivist Architect

Three pioneers out of among deconstructivist architects that exhibited their works in the museum of modern art in 1988 have been chosen in this study. They are

- Peter Eisenman
- Bernard Tschumi
- Daniel Libeskind

Whereas Eisenman and Tschumi have an obvious contribution with the subjective translation of deconstructivism architecture, besides Libeskind also has adopted the deconstructivism morphology alongside his uncanny works.

2.4.1 Philosophical Point of View of Peter Eisenman

A loosely cooperative group known as "Newyork Five". In the mid-1960s which include Michael Graves, John Hejduk, Richard Meier, Charles Gwathmey and peter Eisenman, this group was based on Le Corbusier and other important architects around the world's aesthetics and theory. Peter Eisenman toiled towards finding a link between architectural functions and their elements the did this by earlier by studying works of Le Corbusier and Palla Dio, where he comprehensive read their work for architectural ideas of elements and function, which aided in putting down the issues of the early system in which the elements and function were not linked.

Eisenman encounter so many issues during his 50years career, he has always assertively stood in contrast to popular trends and contemporaries' work. Still, Eisenman is a very respected and influential architect of the contemporary architecture, academic, theorist and practitioner (Belogovosky, 2016).

With each member of the New York five develop styles that are peculiar to each of them. Peter Eisenman became more linked to the deconstructivism movement in which he contributed immensely in translating from deconstruction philosophy to architecture.

Peter Eisenman (1975) produced "a set of formal relationships" between form and space structure which were sets of houses be designed for the period, this was inspired by his early career days in which he explored for an authentic architectural syntactic and even tried doing away with semantics.

Eisenman introduced into architectural discourse the discussion of post functionalism which immensely influenced the movement of deconstructivist with Bernard Tschumi specifically. He made so many literary contributions that are a critical part of architectural techniques evolving. Some sort literary are "Diagram Dairies,", inside out", "selected writing", "barefoot on white – Hot wall" and written into the void; selected writing. Eisenman went down into suppressed in order to show what had to be, stay unseen in functionist and humanist architecture that is the site's history (Belogolously, 2016).

However, the process of construction, diagrams, and sketches are used to produce concept form, which Eisenman proposed which are produced my true elements, whereas traditional consideration holds scarce meaning. Eisenman's design has a combination of linguistics, art, and philosophy, in which the French philosopher Jacques Derrida and Fredrick Nietzsche had an enormous impact on his work. Eisenman focuses on one sector or the other in his "from functionalism to week form" even as a result of the enormous contribution to architecture through his theoretical work and built work (Corbo, 2015).

Eisenman began a new language of which the focus was structuralism when he came to the realization that functions are differentiated from building to building, making him keep aside functionalism and humanism. Structuralism involves handling each element of the building and analyzing its structure and function, in addition how it influenced the form of the building. Eisenman's view of architecture transformed from functionalism to deconstructivism.

2.4.2 Philosophical Point of View of Bernard Tschumi

"Derrida.... asked me why architects should be interested in his work, since, he observed, 'deconstruction is anti-form, anti-hierarchy, anti-structure – the opposite of all architecture stands for.' 'Precisely for this reason,' was my response" (Bernard Tschumi).

In 1983, Bernard Tschumi drew the world's attention to him when he won the design competition for the "Par De La Villette", which is innovative in architectural practice. Tschumi is also well known as one of the notable architects of contemporary time. The "Par De La Villette" is a cultural pack of 125arce in which its activities are based so much on nature. Tschumi has won numerous awards.

According to Dickinson (2011), Tschumi understood the inseparability of architectural schemes and content. He later began to use materials; he asserted that architecture is the concept materialized. He stressed that the utilization of material was an avenue to

buttress the core idea of the project. He argued that architecture is concerned with particular concepts and ideas (URL 10).

Tschumi stressed that the issues with technology and the technology of building are two, they are; the technology that is incidental and technology that is critical. The type of technology that enables us to do something fast and aid us with the visualization of things we could not see before with the help of computers in architecture is known as incidental technology. An incidental technology also assists us in the invention and tackling challenges we could not deal with. While the other technology is reasoned as "qualitative", it could be any particular thing that aids us in wholly changing the avenue by which we process our definition of sense of place and our environment.

Tschumi went further to state that architecture could be comprehended in three ways, that is architecture is an effect, concept, and percept, he went against Vitruvius definition as beauty, solidity, and utility, but instead as philosophical classes. Thus architecture has to be pass and idea, has to be experienced by a medium and also concerning perception, which has to trigger emotion, so the architecture has these three. He stresses that these three stated above cannot be separated. The bases of Tschumi architectural practice is his critical comprehension of architecture, in which he argued there is no space with a program, through his design circumstances for the invention of living, instead of bringing back known symbolic and aesthetic conditions of design.

Tschumi (1987) articulated his illuminating notion of pleasure in architecture, by which he said his pleasure has not to be reviewed in viewing building, whether munificent work of history or recent architecture, but instead deconstructs them. The theory is the initial point of the project, in which theoretical argument was created over some length of time and also whole guideline, theory going before practice or practice before theory (Walker, 2004).

2.4.3 Philosophical Point of View of Daniel Libeskind

Libeskind is well known for his capacity to bring to the surface cultural memory of projects. Libeskind is deeply rooted in his commitment to poetry, literature, music, and philosophy. His aim is to create architecture that is sustainable, unique and speaks for itself.

Daniel Libeskind is among the few architect designers that can assert that they have a critically- defined style. Angular forms have made Libeskind's work distinct, also with interesting planes and Libeskind also utilized diagonally-sliced windows, a method he has utilized to enormous impact in museums and memorials, shopping malls, skyscrapers, and conference centers.

Libeskind projects have been associated with deconstructivist, a movement with the period of postmodernism, which is known for its distortion and fragmentation (Allen, 2016).

In a TED talk back in 2009 (URL 11), Libeskind explains what inspires his peculiar approach to architecture, in which he believes that optimism can drive architecture to a better place. He stated that architecture is not about concrete or glass or another element, but is about wonder. This part is stressed by Jacques Derrida's theory of deconstruction, in which architecture can be seen as a kind of language rooted in a changing relation between differing elements.

Libeskind once summarized his practice as comprehensible architecture that understands history. he also asserts that architecture is a medium of communication, in which, he stresses that a building is a means by which stories are told, which is not just about architecture itself (Libeskind & Goldberger, 2014).

Libeskind stressed that architectural space, should be part of the story it wants to tell and not just a volume to be filled, but a symbolism of the structure. Thus the symbol carries one to a place where language itself could not be completely understood, that is going above the material significance. Libeskind being a deconstructivist architect utilizes the specific metaphor of fragmentation, specifically concerning historical occasions like holocaust and war in his works.

Tuor									, 10101	Forming Operations of Interior Architectural										
		Ch			ormin	ig Ope	eratio M	ns of I Iorphol	nterio logy	r Arch	itectu	Morphological Approach of The Deconstructivist Architect								
		Non-centrality of construction Presentness	Free-floating Signifiers	JXes		Superimposition of layers	ence	lity	Deconstructing Binary opposition		ßu	Fragmentation	Controlled Chaos	on	gu	Superimposition & Superposition	e	orphic		
	Case Studies	Non-central construction Presentness	Free-f	Paradoxes	Trace	Superi layers	Difference	Iterability	Decon Binary	Shear	Bending	Fragm	Contro	Addition	Layering	Superi Superj	Torque	Biomorphic	The interior morphology of the project	The morphological approach of the architect
Peter Eisenmans'																				
schumis'																				
Bernard Tschumis																				
eskinds'																				
Daniel Libeskinds'																				

Table 4: The frame of work of the study (developed by the author based on Hoteit, Moffett, and Ching).

2.5 Chapter Conclusion

On the whole, the theoretical background of this study illustrates that it is not all of the principles of the deconstruction philosophy in linguistics that were literally translated to architecture, despite some principles have been converted, for instance, the principle of deconstruction 'the centrality of presence' altered in architecture to be 'presentness' others were modified to suit architecture with renamed it such as 'the centrality of language' in linguistic turned into 'the centrality of construction' in architecture. Correspondingly, some of these concepts kept on the same name and ideology like the principle of 'binary opposition'. However, the translation from linguistic to architecture for this intellect was handled by the French philosopher Jacques Derrida and among architects on the head of them Peter Eisenman.

Despite deconstruction relies upon ongoing displacement of a form or structure, which means breaking down all principles of the conventional architectural form, yet, some formative operations for the architectural morphology are consciously or unconsciously utilized through interior spaces. additionally, those forming notions give a hand of reads such morphological approach in an objective eye conversely than a subjective perspective and only standing on a philosophical view.

However, a theoretical background of the selected architects within this research is provided, besides their points of view towards architecture, additionally, a brief of their philosophical backdrops is mentioned through reviewing the literature.

Chapter 3

THE MORPHOLOGICAL APPROACH OF DECOSTRUCTIVISTS THROUGH INTERIOR SPACES

While reviewing the literature, the architectural form deconstructivism has been played a significant role in order to provide a new approach of reading the architectural morphology. Due to this, in this chapter, research methods are discussed in order to understand the unprecedented deconstructivist architectural form in the interior morphology spaces created by the selected deconstructivist architects. The evaluation carried out the deconstructivism characteristics used by selected architects based on its theoretical notions, besides the strategies for elaborating those subjective theories into a particular architectural form with a view to be tangible. Moreover, the study examines the forming of interior architectural morphology that be qualified to their projects in order to comprehend their approaches of generating such internal morphs. It has been discussed in the previous chapter the three architects; Peter Eisenman, Bernard Tschumi, and Daniel Libeskind, who affected by the deconstructivism movement. Consequently, the process of analyzing the interior morphology, notions, and elaborating them within such projects are the prime focus during this chapter.

While reviewing the literature, it had been found that the morphological approaches of generating the architectural form of deconstructivism have been played an unprecedented tactic by deconstructing the conventional architecture form. Whereas this style derived from profound philosophy as it was declared in (Chapter 2), that

seems it impedes many interior architects and students to comprehend its morphology of internal spaces or misunderstood it owing to that the subjective translation of the philosophical background confronted by the deconstructivist architects has elaborated in various morphological approaches over the interior spaces. Since there is a scarce of studies handling the architectural morphology of deconstructivist architecture, and there is no equivalent reaction via academic researches examining the forming of the interior spaces of the deconstructive buildings.

3.1 The Methodology of the Research

The research conducted on a multi-qualitative research methodology. Thus, descriptive, evaluative, and exploratory methods in order to answer the research questions placed in Chapter 1. Within this part of the study, studying the forming operations of internal spatial with regard to the philosophical connotations of the deconstructivism.

These tactics are mentioned by Groat and Wang in their book Architectural Research Method (2013) within the main method of the qualitative study through observing themes of the context, in order to congregate the considering notions by creating a combination of similar things.

Nonetheless, based on the theoretical background of this study, an investigation of whether the deconstructivist internal spaces have created by some of the forming architectural morphological operations that found in the traditional architectural form or totally deconstructivist approaches are employed in their projects. However, it may comprehend that if formed via a logical ground or just a translation of deconstruction philosophy.

The study looks towards interior forms' notions, techniques, and approaches of the three deconstructivist architects; Peter Eisenman. Bernard Tschumi, and Daniel Libeskind. So a framework is developed by the author in accordance with several resources such as Hoteit, Moffett, Ching, in order to support the study evaluation of the architectural morphology of selected architects through the interior spaces of their projects.

3.2 Delimitations of the Research

As a chronological aspect, this research focuses on the deconstructivism movement of architecture and strictly of its architectural morphology of interior spaces. This movement categorized by characteristics that translated from a theoretical and philosophical background.

Consequently, an extensive clarification of the deconstructivism characteristics in chapter 2, based on that, forming operations derived from books that studying the formative of the traditional architecture. Accordingly, the research focused on the interior spaces and their architectural morphology.

Also, limited with three deconstructivist architects selected in this study to investigate their approaches of forming the internal morphology, subsequently, this thesis thrives towards works of three prominent deconstructivist architects. First, Peter Eisenman considered as the translator of this philosophy into architectural theory. Second, Bernard Tschumi has collaborated in Parc De la Velle with Jacques Derrida the one that coined this philosophy. Third, Daniel Libeskind was concerned with the metaphoric presence which the essence of deconstructivist philosophy in architectural theory.

Thus, an examination of existed two public buildings situated for each one of these architects to find out the manipulation of its internal morphology and regarding conventional forming operations.

3.3 Data Collection

Data collection of the study relies on the materials regarding the deconstructivist architecture within various books, journals, architectural magazines, and websites. While a part of the data indicated conceivably be based on an analytical evaluation of the projects and models of three selected architects through their official websites that provide various information on the projects such as location, inspiration thoughts, and formative concepts. Other data derived from the articles and books whether written by the elected deconstructivist architects themselves or about them.

3.4 Data Analysis

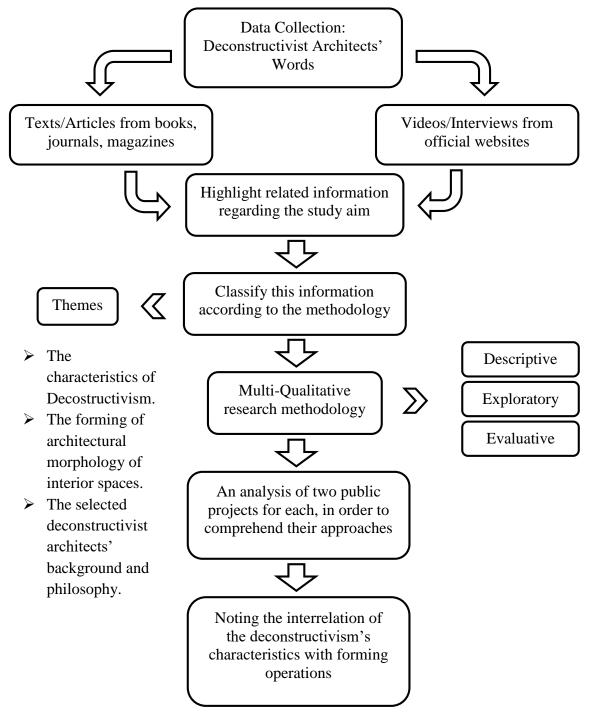


Table 5: Data analysis of deconstructivist architects' morphological approaches

3.5 Case Study Analysis

The methodology used in the research within this section in order to a clarifying of the architectural morphology of each selected deconstructivist architect. Based on reviewing the literature, the analysis of projects of the architects is followed by a brief of the philosophical background of the notions for such deconstructivist projects. Furthermore, an analytical exploratory method conducted on which operations of forming the architectural morphology of internal would be qualified for interpreting the techniques of selected architects.

However, some of the notions intentionally uninterpretable that provided by the deconstructivist architects themselves. Two public projects for each one of these prominent architects are used as case studies of this research. The reason for using existing public buildings is to comprehend the profound or ambiguous meaning of elaborating such approaches of architectural morphology of the internal spaces. Accordingly, the following table (Tabe 6) illustrates that the projects are analyzed for each one selected architects within this study.

Selected Deconstructivist Architects	Public Project
Peter Eisenman	The Wexner Center for Arts. (Columbus, Ohio,
	USA, 1989)
	City of Culture of Galicia. (Santiago de
	Compostela, Spain, 1999 - 2013)
Bernard Tschumi	Parc de la Villette. (Paris, France, 1982-1998)
	The Alesia Museum. (Alésia, France, 2003-
	2012)
Daniel Libeskind	The Jewish Museum of Berlin. (Berlin,
	Germany, 2001)
	Military History Museum. (Dresden, Germany,
	2011)

Table 6: List of selected public projects for each one of the selected architects.

3.5.1 Peter Eisenman

Deconstructivism for him is pushing the boundaries of the conventional models' limitations in order to perceive architecture as a distinct discourse, released of any classical ornamented or external valued, it is just an intersection of endless in artificial and meaning free (Eisenman, 1984).

3.5.1.1 Case: The Wexner Center for Arts

"The Museum That Theory Built." Paul Goldberger (1989)

The Wexner Center for Arts (Figure 18) is considered an ideal example to illustrate the unprecedented architectural approach of Eisenman, which the embodying of conflicted and deliberately awkward moments through complicated intersections in the built spaces whether internal or external with interacting of human occupation of it, accordingly this emancipation of forming the interior morphology is incarnate the deconstructivist architecture.

Consequently, this work notion belongs to the deconstructivism movement, followed by Derrida's linguistic and philosophical notions, which is nihilism and abstraction. This center is within the scope of the University of Ohio to serve students in the materials of visual training and visual modulation. Eisenman manipulates in breaking and cutting in order to provide the student's eye, which lay within the spaces of the center in order to provide a broad space within controlled chaos of structural elements to provoke one to try comprehend the meaning beyond the notion, and may nor a logical reason be found, but philosophical connotations backward to it.



Figure 18: Wexner Center for Arts, 1989. (URL 12)

After accidentally destroying the armory building of the late nineteenth century, Wexner Center is situated in the same spot within the university exactly on the eastern edge of the campus.

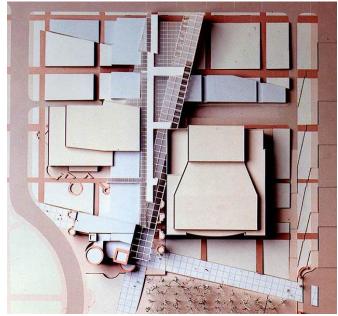


Figure 19: Master model of Wexner Center. (URL 13)

Diagrams of the Project:

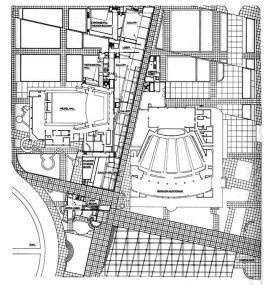


Figure 20: Site plan of the Wexner. (URL 14)

Figure 21: Isometric drawing of the project. (URL 15)

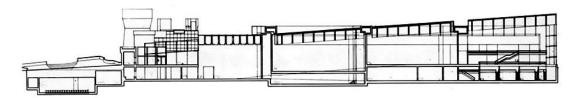


Figure 22: Section A-A. (URL 16)

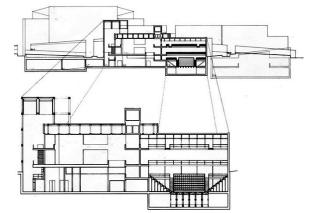


Figure 23: Section B-B. (URL 17)

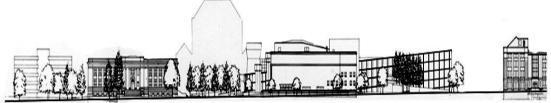


Figure 24: East elevation. (URL 18)



Figure 25: South elevation. (URL 19)

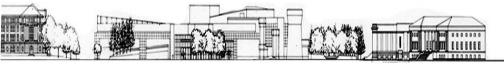


Figure 26: West elevation. (URL 20)



Figure 27: North elevation. (URL 21)

The designing inspiration was a medley of history handled by his philosophical view stand that led to incomplete structural elements and large bricks structure, thus, the architectural language of the projects that looking for perfection and nor depending on the existence of precognitive structure. Due to so, this work manifesting deconstructivism, followed by Derrida's linguistic and philosophical notions, which is nihilism and abstraction. Eisenman manipulates in breaking and cutting in order to provide and questioning the student's eye, which lay within the spaces of the center, providing broad spaces have controlled chaos of structural elements to provoke one to try to comprehend the meaning and may no logical reason, but philosophical connotations backward to it. For Peter Eisenman, the first public project is Wexner Center for Arts, a multifunctional international laboratory for exploration and expansion of artworks, nor just art collection houses or a museum but it replaced the university's Fine Arts Gallery (Figure, 28).

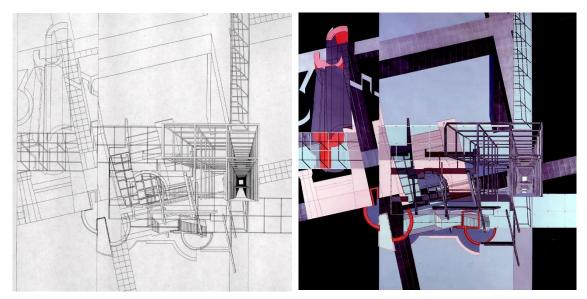


Figure 28: An abstraction of conceptual process of the Wexner. (URL 22)

In terms of characteristics of deconstructivism are used within the architectural morphology of interior spaces, and the operations forming that spaces boosting those philosophical notions within the built environment, based on the theoretical backgrounds of the previous chapter that support the analysis section of this study.



Figure 29: The interior morphology of the Wexner. (URL 23)

Despite the project's structure governed by the orthogonal grid system, unless some structural elements, first, columns landing down yet untouched the ground which is *'Free-Floating Signifiers'* one of the characteristics of deconstructivism, also that defines the concept of using *shear* in order to configure the interior morphology in a route to meet with the idea of looking for the perfection. Then, the connotations of utilizing superposed thematic intersecting beams for illustration the concept of *superimposition*, no actual structural benefits, these alterations between the two floors give some thoughts employed within deconstructivism architecture notions. Thus, this manipulation promotes the influences of the artworks within its internal spaces as one of the routes of provoking the visitors, yet besides the performing of the visual arts itself (Figure 29).



Figure 30: The building of Wexner & the fragmented masonry. (URL 24)

The red masonry designed as a skin of the steel structure in order to summon the spirit of the old building. while a divided tower rebuilt that reflects an ancient arsenal, that gives a thought of the *presence* in architecture as a strong conviction of the place (Langdon, 2014). Nonetheless, this *'fragmentation'* leads one to suspicion if that structure is complete yet; that is the experience of paradoxically of the museum. While the building comes from various mass combined together through *addition*, one of the forming operations which clarified in chapter 2. Thus, an obvious deconstructive notion is strictly originated within overall of the project whether interior or exterior that is *'The Non-Centrality of Construction'*; since the determine center or the central construction is wholly refuted by the deconstructivism architecture (Figur, 30). On the other hand, another aspect of deconstructivist philosophy gave a wide berth through this project which is deconstructing the interrelation between exterior and interior spaces through using elements that reflect that concept, such the external steel structure thrived also to internal spaces of the building called 'The Scaffolding' (Figure 31).



Figure 31: The metal grid 'The Scaffolding' with manipulating colored lighting. (URL 25)

One of the thoughts that the building gives a feeling of unfinished design, the project contains a considerable metal network painted white, as a taste of the architect, moreover, the scaffolding is a reverberate of the concepts of the '*Presentness*' and '*Différance*'. Since the concept of différance about the structural element can individually be presented, also the presence is existing from the past that leads to the future (chapter 2, pp 34, 40), accordingly, the idea reflected on the project through the scaffolding, which is derived from the archetype of dual-route between northern and southern sides.

However, the concept of this metal grid is continued through the interior spaces in order to expose the concept of deconstructing the interrelation between interior and exterior spaces (Figure 32).



Figure 32: The external element 'the scaffolding' continue through internal spaces. (URL 26)

Table 7: An evaluation of the operations might be utilized to elaborate on the deconstructivist strategies through The Wexner Center, (Developed by the author in accordance with several resources such as Hoteit, Moffett, Ching).

Characteristics of Deconstructivism		Forming of Interior Morphology	
The Non-Centrality of Construction	\checkmark	Shear	\checkmark
Presentness	\checkmark	Bending	
Free-floating Signifiers	\checkmark	Fragmentation	\checkmark
Paradoxes		Controlled Chaos	\checkmark
Trace	\checkmark	Addition	\checkmark
Superimposition of layers	\checkmark	Layering	
Différance	\checkmark	Superimposition & Superposition	\checkmark
Iterability		Torque	
Deconstructing Binary Oppositions	\checkmark	Biomorphic	

3.5.1.2 Case: City of Culture of Galicia

The project places within a distinctive spot of Province of Galicia on a small hillslope Monte Gaias, where the hilltop has a view of Santiago de Compostela. This cultural center (Figure 33) consists of six buildings, designed as three pairs: the history museum and the center of new technologies; the building of central services and the musical theater; the library of Galicia and Periodicals Archive. For this project's design, Eisenman inspired by various aspects, for instance, the archaeology of the city and the topography of the site in parallel with the philosophical point of view of the superimposition of layers, trace, and his stand view of deconstructing the binary opposition. Therefore, these aspects have approached the design conceptually in order to reverberate on the architectural morphology of the building.



Figure 33: The City of Culture of Galicia Museum. (URL 27)

Diagrams of the Project:

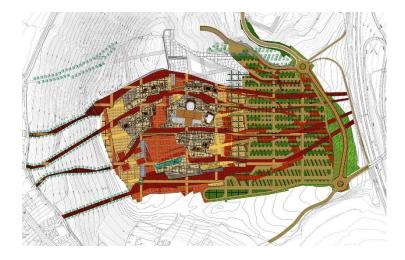


Figure 34: Site plan of the museum. (URL 28)



Figure 35: Site elevation. (URL 29)

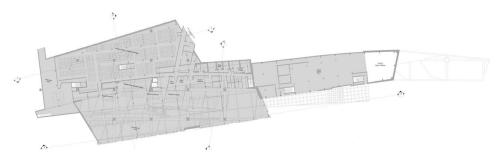


Figure 36: The plan of Wexner, level -1. (URL 30)

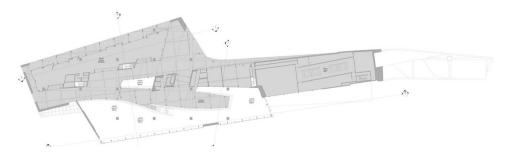


Figure 37: The plan of the museum, level 0. (URL 31)



Figure 38: Section model A-A. (URL 32)



Figure 39: Section model B-B. (URL 33)

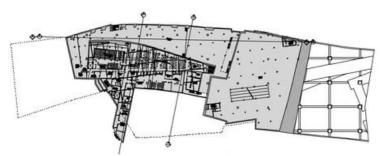


Figure 40: The library building plan, level -1. (URL 34)

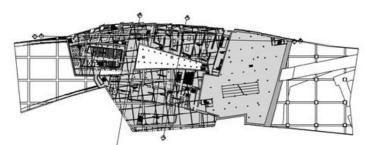


Figure 41: The library building plan, level 0. (URL 35)

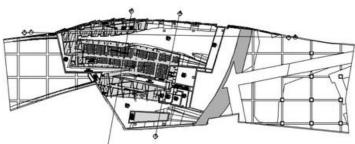


Figure 42: The library building plan, level 1. (URL 36)

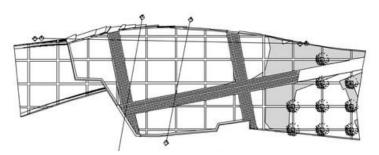


Figure 43: The library building roof plan. (URL 37)



Figure 44: Section A-A. (URL 38)



Figure 45: Section B-B. (URL 39)

Since the biomorphic forms' operations inspired by nature and natural elements whether organic or geometric shapes as been stated in (Chapter 2), which handled via controlled chaos of waving surfaces, the project defines how the designer influenced by the hillsides and the medieval routes within the city(Figure 46).



Figure 46: The biomorphic inspiration of the museum. (URL 40)

Thus, the designing process goes through three sets of details while using the superposition operation to evolve the design (Arcspace, 2012). First, a streets plan to cover the center of Santiago which is the medieval spot, and overlaid on the contours of the hillslope site topography that has the view of the city. Due to that *biomorphic* of the place, it seems that Eisenman intended to reflect that contours and streets lined on the exterior morphology of the Center (Figure 47), which may give one the sense of a familiar *presence* of the place in unprecedented forms (Archinect, 2019).



Figure 47: The contours reflection on the museum form. (URL 41)

The concept of *'superimposition of layers'* is handled through a grid of Cartesian modern over the routes of the medieval (Figure 48).

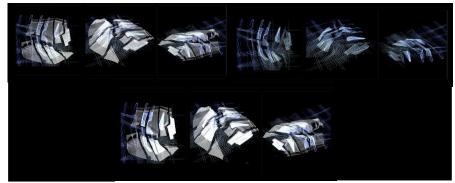


Figure 48: A diagram illustrates that the process of utilizing the concept of superimposition. (URL 42)

Second, one of the concepts of deconstructivism '*Trace*' (Figure 49), gave the impression of being played a prominence role with the architect to translate the language of the medieval city become an overlaid on the buildings' form and site plan, which handled through the '*superimposition of layers*' for the site and the conceptual form of the project.

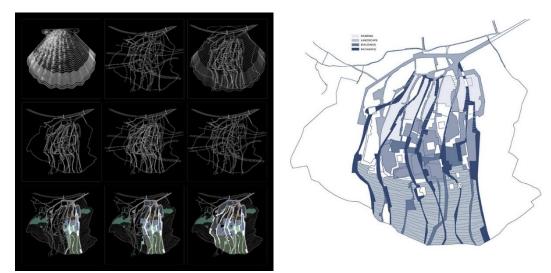


Figure 49: The graphs show that the process of using the notion of the trace. (URL 43)

Third, using modeling software on the computer to elaborate the previous notions in practical architectural morphology of the center, due to generating topological *surfaces* represent the old in an exceptional manner (Figure 50). Accordingly, that *paradoxes* of surfaces seem to procreate breaking down the principle of *binary opposition*, also, these bending surfaces whether internal and external might reverberate the concept of that is 'the presence' is never absolute.

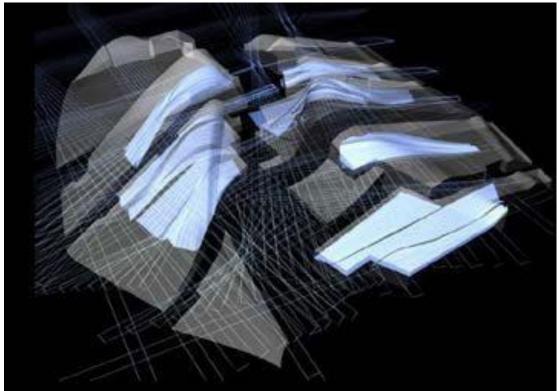


Figure 50: The generating process of the typological surfaces. (URL 44)

Despite these notions elaborated on the external mass, it affects the architectural morphology of interior spaces accordingly to one of the prominence principles of deconstructivism that is *deconstructing the interrelation between exterior and interior*, in many aspects, for instance, the hillslope in parallel with the contour surfaces are translated into the interior morphology (Figure 51).



Figure 51: The reverberates of the hillside concept on the interior spaces. (URL 45)

Nevertheless, the ground floor pattern and materials are extended from external spaces continually through internal spaces' grounds in order to give clear thoughts to the visitors. It is cultural center once back again, which may reflect the idea of deconstructing the interrelation between exterior and interior spaces, which is also noticed before in Wexner Center in different approach according to 'the context' as Eisenman claimed (Figure.52).



Figure 52: The morphological approach of the exterior & interior form. (URL 46)

Table 8: An evaluation of the operations might be utilized to elaborate on the deconstructivist strategies through The City of Culture of Galicia, (Developed by the author in accordance with several resources such as Hoteit, Moffett, Ching).

Characteristics of Deconstructivism		Forming of Interior Morphology	
The Non-Centrality of Construction	\checkmark	Shear	
Presentness	 ✓ 	Bending	✓
Free-floating Signifiers		Fragmentation	✓
Paradoxes	 ✓ 	Controlled Chaos	✓
Trace	 ✓ 	Addition	✓
Superimposition of layers	 ✓ 	Layering	✓
Différance		Superimposition & Superposition	✓
Iterability		Torque	
Deconstructing Binary Oppositions	✓	Biomorphic	✓

3.5.2 Bernard Tschumi

When Tschumi was a teenager, he was more interested in literature, film, philosophy, and other things rather than architecture as he declared in one of his interviews. Later on, he inspired by architecture through his visit to Chicago for the first time when he was 17 years old. Bernard Tschumi stated that "I suddenly discovered what a city could be, coming from a small, smallish Swiss down" (URL 46).

3.5.2.1 Case: Parc de la Villette

Among 470 proposals of global competitors, the design of the Parc de la Villette was elected, accordingly to various aspects of the competition objectives, such as looked on procreate an era's vision through its approach, also an expansion of culture within a master spot in Paris. Unlike other entries, Tschumi provides unconventional visionary of the park instead of the traditional approach that may fully depend on nature and landscaping as a predominant power of the design. On the contrary, he envisioned combining the natural with artificial together in order to give continuously thoughts of reconfiguring and discovering. The Parc de la Villette (Figure 53) might be one of the whopping projects ever built, fragmented and separate buildings within a single structure, which provides interconnection of the current limitations of the city and its needs (Souza, 2011).



Figure 53: Parc de la Villette. (URL 47)

However, deconstruction in linguistic of Derrida has inspired Tschumi, due to so, he contacted Derrida and request him to collaborate for reverberating that philosophy on the park, in order to be as an architectural representation of the Derrida's concept of re-contextualizing the text to provide a neo meaning through the alteration of the context (Derrida, 1989).

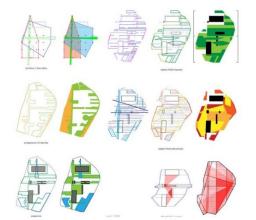


Figure 54: The conceptual process of the park. (URL 48)

Diagrams of the Project:



Figure 55: The master plan of Parc del la Villette. (URL 49)



Figure 56: 3D Visual of Parc del la Villette. (URL 50)

Tschumi classified his approach of Parc de la Villette as points, lines, and surfaces. This open-air cultural center about 135 acres, organized via using a grid of 35 points which them 'follies' as Tschumi claimed (Figure 57).

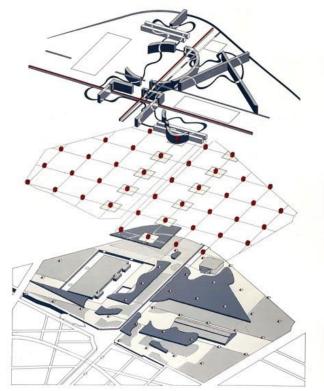


Figure 57: The project designed by using layers superimposed. (URL 51)

In addition, the concept of superimposition of layers is represented in the process of design's notion, which seems translated into superposed surfaces, some of that dedicated as a green space of the park.

These follies derived from *fragmented* cubes, naturally repeated while each folly is unique and different. This controlled chaos of follies reflects the deconstructivism characteristics of *'Différance'* and *'Iterability'*. Broadbent reported that follies as a shattering of a singular cube, where the pieces uncollectable together as one cube, instead, it will create a new image (Figure 58).

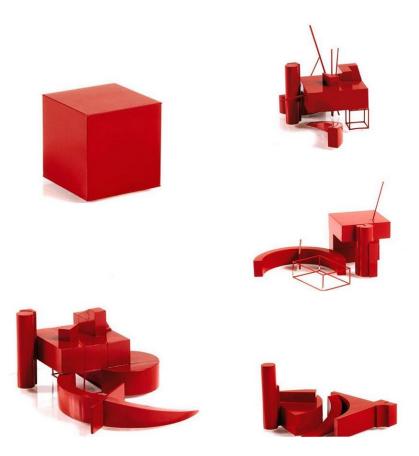


Figure 58: The follies concept derived from a singular. (URL 52)

On the other hand, the designing approach of addition or subtraction presented as solid and void of the follies, each one in different ways seemingly derived from a deconstructivism characteristic, while the absence and presence define the concept of *'Presentness'* of Parc de la Villette.

It seems several morphological operations have utilized in order to provide such follies, bending operation is used as waving surfaces through the sunshades hanging structured, also gives thought for applying of the shear operation (Figure 59). The concept of *'Free-floating Signifiers'* represented here.



Figure 59: Sunshade over an open area for sitting a folly. (URL 53)

In general, of designing the follies seemingly depends on *fragmentation* operations, despite on the face of it is lean on the *controlled chaos* of fragmented layers, other concepts are applied in some of the follies, such '*Torque*' is operated within a folly, as staircase open-air or closed unites as spiral stairs, which is elaborated as a part of the folly's design.



Figure 60: Torqued elements elaborated within follies. (URL 54)

These morphological operations elaborated through the designing of the follies may provide connotations of the '*Paradoxes'* & '*Différance*' as concepts of deconstructivism (Figure 61).



Figure 61: Different shape of follies. (URL55)

The connotations of the principle '*Différance*' is that each folly can be presented individually, each one would be used alone.

Another concept of deconstructivism applied in the park, the iteration of the follies escalates the '*Iterability*'. That iteration escalates the idea of '*Deconstructing the Binary Opposition*', once nor a folly similar to another which gives thoughts to dismantling the notion of interconnection or cause/effect.

Moreover, a huge sphere metallic reflects la Villette as a panoramic image (Figure 62), which might represent the shape of the earth, that turn over in one's mind to **biomorphic** of interior morphology operation of the park (Figure 62).



Figure 62: Metallic sphere reflects Parc de la Villette image. (URL 56)

Table 9: An evaluation of the operations might be utilized to elaborate on the deconstructivist strategies through Parc de la Villette, (Developed by the author in accordance with several resources such as Hoteit, Moffett, Ching).

Characteristics of Deconstructivism		Forming of Interior Morphology	
The Non-Centrality of Construction	\checkmark	Shear	
Presentness		Bending	
Free-floating Signifiers	\checkmark	Fragmentation	✓
Paradoxes	\checkmark	Controlled Chaos	✓
Trace		Addition	
Superimposition of layers	\checkmark	Layering	✓
Différance	\checkmark	Superimposition & Superposition	✓
Iterability	\checkmark	Torque	✓
Deconstructing Binary Oppositions	\checkmark	Biomorphic	 ✓

3.6.2.2 Case: Alesia Museum

The project locates in the middle of France, whereas the same spot of the battle between Cesar and Gauls rummaging through history. Despite whole traces of the battle are obliterated, due to that, the museum regenerates the battle's spiritual environment and interpretation by recreating earthworks and battlements within several places, whilst the small medieval town located within a valley.



Figure 63: The Museum of Alesia. (URL 57)

Diagrams of the Project:

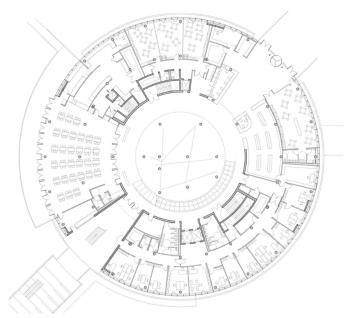
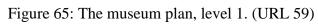


Figure 64: The museum plan, level 0. (URL 58)





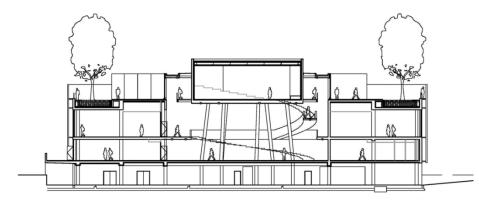


Figure 66: Section A-A. (URL 60)

The building scheme composed of two different structures, separated and correlating at the same time. One of them as a museum's building, the second as visitors' center. The interrelation between the two structures may reflect the concept of **'Différance'** of deconstructivism architecture, once the idea behind that is provided by Tschumi. The morphological operation of **'Torqued'** is might be clearly used within the structural design, as well as, the **'controlled chaos'** operation is utilized through placing the columns (Figure 67).

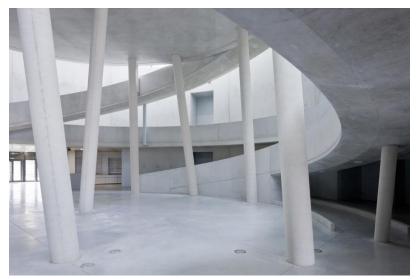


Figure 67: The entrance lobby of the museum. (URL 61)

Moreover, the roof used as a view platform of breathtaking viewing of the city, the woody curtain walls with openness **fragmented** shape allows the visitants to see through it (Figure 68).

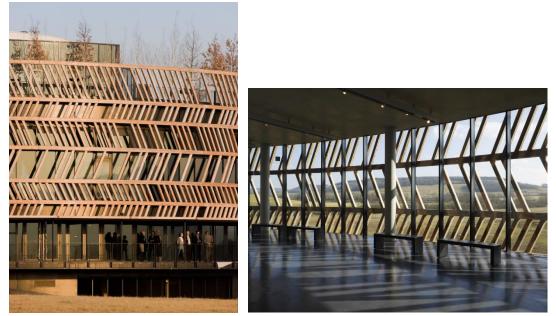


Figure 68: An elevation of the museum. (URL 62)

Despite the internal spaces give thoughts that sort of emptiness spaces, besides the connection with nature is thoughtful within the museum, due to that, it seems the interrelation between the exterior and interior dismantled which may reflect the notion of deconstructing the interconnection of the external and internal spaces. That might help the visitors to interact with the spaces of the museum.

Table 10: An evaluation of the operations might be utilized to elaborate on the deconstructivist strategies through Alesia Museum, (Developed by the author in accordance with several resources such as Hoteit, Moffett, Ching).

Characteristics of Deconstructivism		Forming of Interior Morphology	
The Non-Centrality of Construction		Shear	
Presentness		Bending	 ✓
Free-floating Signifiers		Fragmentation	 ✓
Paradoxes		Controlled Chaos	 ✓
Trace	 ✓ 	Addition	 ✓
Superimposition of layers		Layering	
Différance	 ✓ 	Superimposition & Superposition	
Iterability		Torque	 ✓
Deconstructing Binary Oppositions		Biomorphic	

3.5.3 Daniel Libeskind.

For Libeskind, architecture is quite emotional, complex, and abstract as the music is, connectedly to the soul of man, in addition, architecture is based on the balance as he claimed, then this balance is actually in the inner ear, thereby, both architecture and music are having interrelatedness with man exceeds the sight vision.

3.5.3.1Case: Jewish Museum Berlin

The Jewish Museum of Berlin (Figure 69), is explicitly showing and merging of the Holocaust's repercussions, for an unprecedented time in postwar Germany. The Museum placed next to the Justice building of the original Prussian Court. Libeskind's approach through design it was inspired by different aspects: such as a comprehension of the events of the Holocaust; convincing thoughts of integrating the memory of the Holocaust into the consciousness of the city 'Berlin'; representing of the past history in the city to ensure the acknowledgment of Berlin's life from through the memory for its future.



Figure 69: The Jewish Museum of Berlin, the old Baroque Museum and the new extension Jewish Museum. (URL 63)

Diagrams of the Project:

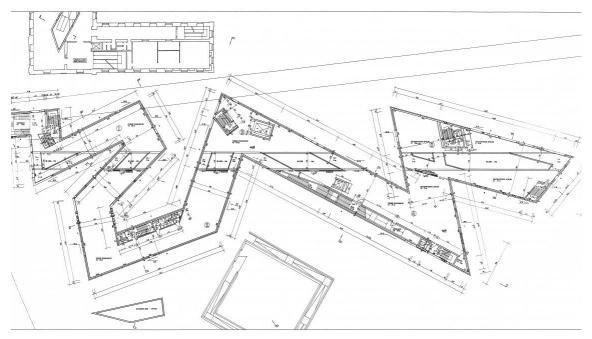


Figure 70: Museum Plan. (URL 64)

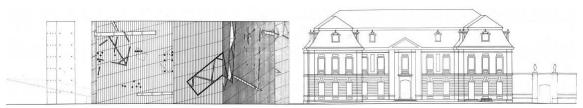


Figure 71: Elevation 1-1. (URL 65)

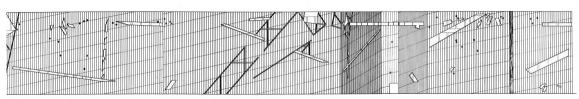


Figure 72: Elevation 2-2. (URL 66)

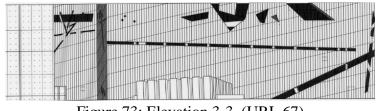


Figure 73: Elevation 3-3. (URL 67)

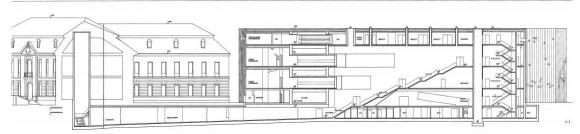


Figure 74: Section A-A. (URL 68)

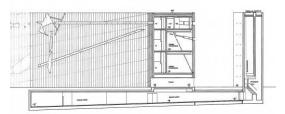


Figure 75: Section B-B. (URL 69)

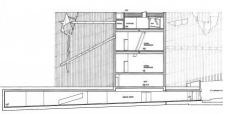


Figure 76: Section C-C. (URL 70)

The old Baroque Museum in Berlin "Kollegienhaus" built-in 1735, is attached to the new extension, which also Libeskind designed the addition glass hold on a distinctive structure and steel columns support the glassed roof. while the old structure through underground escalated within the new structural surface, in order to maintain the contradictory autonomy, as Libeskind claimed (Figure 77).



Figure 77: The original Baroque Museum. (URL 71)

As a new extension 'the Jewish Museum' there is no formal entrance for it. The visitants should enter through the original Baroque museum towards a corridor underground, which might provoke the visitor, and afford the anxiety through descends of a stairway, that provides hiding sense and is deprived of the direction till coming to cross routes of three ways.

The exterior form reverberated into the interior morphology, similar controlled chaos and complexity. The promenade is formulated through empty spaces, galleries, and dead ends (Figure 78). While a considerable part of the new extension is absent of windows, the other portion utilized fragmentation shapes of windows (Figure 79).



Figure 78: Exhibit interior space of the museum. (URL 72)



Figure 79: The opening elements of the museum. (URL 73)

Through the entrance corridor, a vertical void plays like a light well at the same time it, with the descending stairway, considered as a dramatically void. That may provoke and gradually expose the visitor to rummage through history and makes them donate emotionally with the past events (Figure 80).



Figure 80: Light-well void. (URL 74)

This void with fragmented shape through the zigzagging interior morphology of the new extension building, by creating vacant space that embodies absence, also may provide a sort of suspicious for the visitor.

The museum narrated three different stories through three pivotal routes underground. The first route head up to dead-end towards the Holocaust Tower' (Figure 81) (Studio Libeskind).



Figure 81: The dead-end underground towards 'the Holocaust Tower'. (URL 75)

The second route leads to the Exile and Emigration Garden outside the building, remembering ones who be left alive and obliged to leave Berlin by Nazi forces. Therefore, these solid boxes ruled by a grid, represent a sort of spiritual translation of the past 'memory' hinging on a present of architectural elements towards providing an immortal memory till the future (Figure 82).



Figure 82: The Exile and Emigration Garden. (URL 76)

The third route and the longest, head up to the exhibition spaces of the building, besides retaining the continuum of history through the stair of continuity (Figure 83).

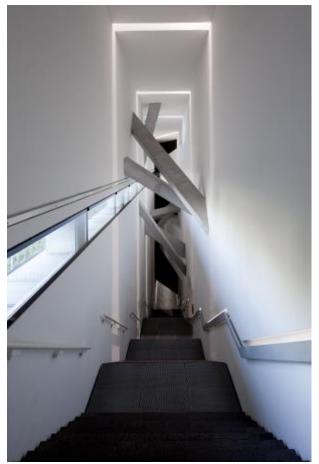


Figure 83: The longest staircase of the museum. (URL 77)

Despite the fragmentation appearance of illegible beams as structural elements, it gives an impression of thoughtful utilizing the concept of controlled chaos. The idea of preserving the old and new structure of the museum might mount up the deconstructivist's notion of '*Presentness'*, the previously stated before in chapter 2 (p 34).



Figure 84: Fragmented windows. (URL 78)

The *fragmentation* operation is the prominence of the design's approach whether exterior and interior morphology, escalated with *controlled chaos*, this abstraction would express emotions of events happened. Libeskind's approach of the museum is intended to expose the visitor to experience the memory through the past (Figure 84).

Evan Pavka (2010), explains that the museum has emotionally spaces. For instance, the void runs over up to the height of the building, bounded by concrete walls expose coldness, within a warmness emanates comes through a tiny slit skylight, moreover, a huge number of iron faces cover the ground. That atmosphere provides a powerful sense and passionate about the events of the Holocaust (Figure 85).



Figure 85: One of the prominence internal spaces of the museum. (URL 79)

Table 11: An evaluation of the operations might be utilized to elaborate on the deconstructivist strategies through The Jewish Museum of Berlin, (Developed by the author in accordance with several resources such as Hoteit, Moffett, Ching).

Characteristics of Deconstructivism	Forming of Interior Morphology						
The Non-Centrality of Construction	\checkmark	Shear					
Presentness	\checkmark	Bending					
Free-floating Signifiers		Fragmentation	 ✓ 				
Paradoxes		Controlled Chaos	\checkmark				
Trace		Addition					
Superimposition of layers		Layering					
Différance		Superimposition & Superposition					
Iterability		Torque					
Deconstructing Binary Oppositions	\checkmark	Biomorphic					

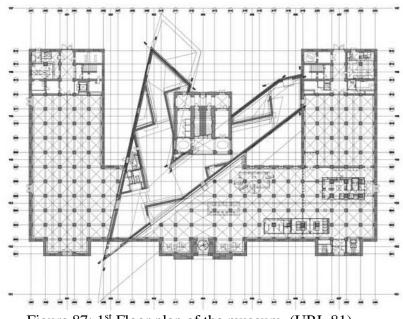
3.5.3.2 Case: Military History Museum

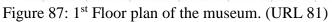
The life of the building went through various phases, initiated as an armory, escalated to be the Saxon Army Museum, later on as Nazi Military Museum, then East and Soviet Museum of Germany (Figure.86) Eventually, the government of German closed it and organized a global competition. The institution had a vision of the museum, any proposal of the competitors would be null if not render that vision within the designing approach, which the new extension must not intervene on the original building's facade. Libeskind took the challenge of the project requirements. Without any affection on the structure of the old building, the new expansion played an unprecedented and a translation of characteristics of the deconstructivism, for instance, it is deconstructing of the conventional symmetry of the classical museum, which gives thoughts of elaborating of boldly utilizing the concept of 'Deconstructing binary oppositions'.

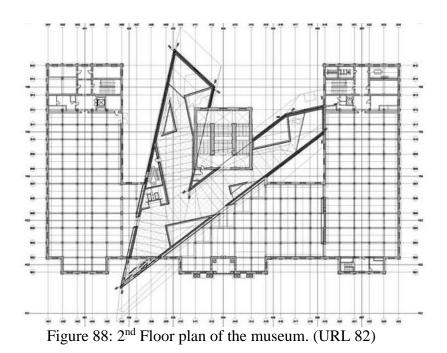


Figure 86: The Military History Museum of Dresden, Germany, (2011). (URL 80)

Diagrams of the Project:







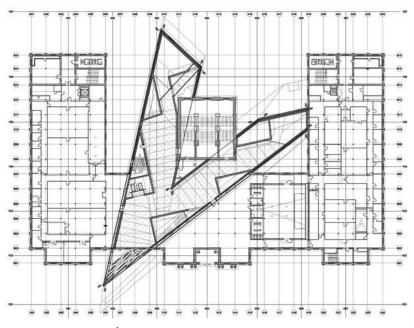
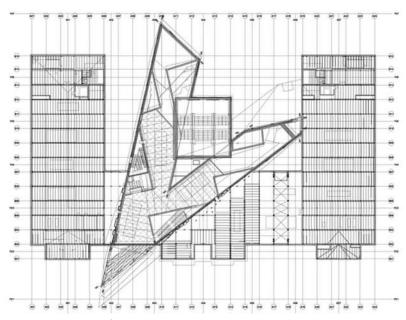
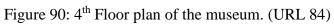


Figure 89: 3rd Floor plan of the museum. (URL 83)





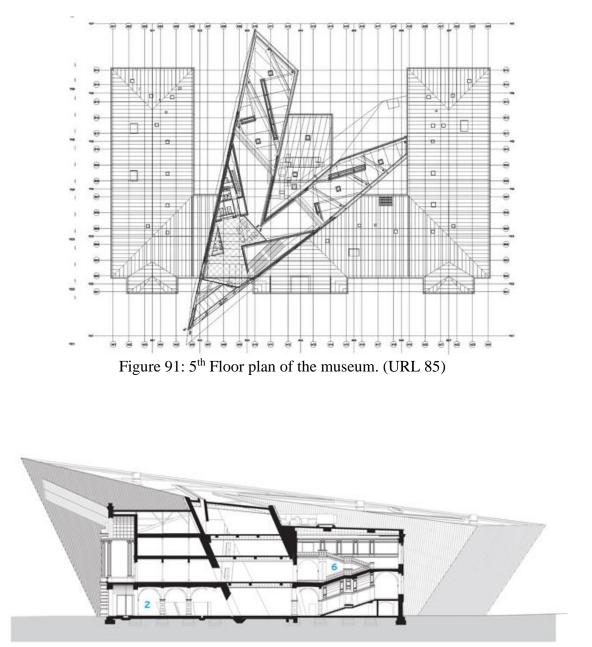


Figure 92: Section A-A. (URL 86)

Daniel Libeskind states that the invisibility addition of the new extension from the back, become visible towards the front elevation of the neoclassical museum that creates a gusty and bold interruption, in order to penetrate the historical arsenal and provides a new experience. This organized violence or in other words 'controlled chaos' will engage people with the deepest meaning of architecture and express the military history intertwined to the city's fate (Figure 93) (Pavka, 2010).

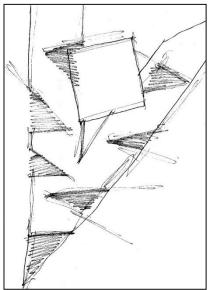


Figure 93: The new extension's sketch by Libeskind. (URL 87)

The transparency and openness of the new extension's facade push through the rigidity of the existent building, likewise the historical story of letting away the authoritarian past by the German government (Figure 94).



Figure 94: The transparency of the new extension. (URL 88)

The *controlled chaos* of the steel structural elements offers *fragmentation* shapes, these operations assert of unprecedented superposed of conventional and innovation. That reflects one of the cornerstones of the morphological approach of deconstructivism, which is *'the Non-Centrality Construction'*. Moreover, this interpretation of the old and new building seemingly a mirror of deconstructivist's concept of **deconstructing the interrelation between the exterior and interior spaces**.

The new *addition* of the museum regenerates a tune of reconsideration of the city's memory of annihilated through WWII, which most probably leads to the notion of *'Presetness'* of deconstructivism architecture within this project, has been defined previously in Chapter 2. While the highest point of the wedge is a 30 meters' high viewing platform on the 5th floor, inside the new wedge which provides a breathtaking view of Dresden. As well as, the wedge oriented towards the trend of the provenance of the bombs, which releasing and generating a dramatic space of reflection on the visitant's mind (Figure 95).



Figure 95: 3D Visual of the viewing platform within the wedge, which is clarify the notion of the panoramic scene of city. (URL 89)

The contradiction of the interior spaces of the old building and new extension wedge is boldly obvious, owing to the museum upon displaying the history of the German military for the visitors, it provides a new approach of assessing the historical violence events (Figure 96), beyond the weapons and uniforms (Figure 97).



Figure 96: Different themes of the internal spaces of the old and new building. (URL 90)

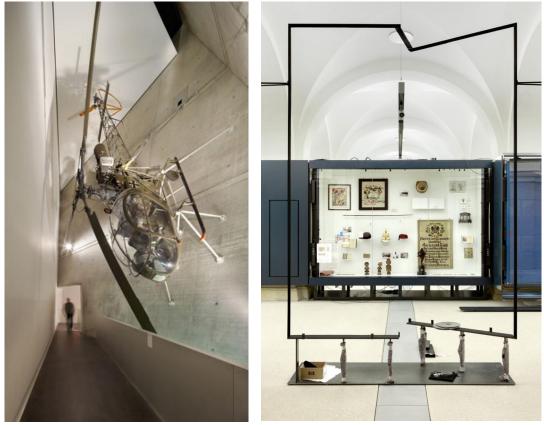


Figure 97: The juxtaposition of innovation and conventional issues by displaying historical elements. (URL 91)

Table 12: An evaluation of the operations might be utilized to elaborate on the deconstructivist strategies through the Military History Museum, (Developed by the author in accordance with several resources such as Hoteit, Moffett, Ching).

Characteristics of Deconstructivism	Forming of Interior Morphology						
The Non-Centrality of Construction	\checkmark	Shear					
Presentness	\checkmark	Bending					
Free-floating Signifiers		Fragmentation	\checkmark				
Paradoxes		Controlled Chaos	\checkmark				
Trace	\checkmark	Addition	\checkmark				
Superimposition of layers		Layering					
Différance	\checkmark	Superimposition & Superposition					
Iterability		Torque					
Deconstructing Binary Oppositions	\checkmark	Biomorphic					

3.6 Chapter Conclusion

To sum up, the interior morphological approach of the deconstructivist buildings might be confusing and difficult to comprehend its environmental form, once the architects' approaches seem to be looking for rummaging through history by the presence of architectural form whether interior or exterior, even it seems to expose the visitant to suspicion in everything. Nonetheless, an attending of a subjective deconstructivism's characteristic within a project by a deconstructivist architect is severally different by each one. Due to that, it may provide a misconception of the deconstructivist approaches by the interior architects and students who admire this style of architecture. Furthermore, the interior architects and students, who have scant awareness of the theoretical background of deconstructivism architecture and its strategies, one may do not be able to grasp the backdrop of such morphological approach, meanwhile, the next chapter is discussing the various stand views of deconstructivist architects through the analyzed cases done within this chapter, these criteria of exploring the architectural morphology for the pioneers of deconstructivism through interior spaces would be advantageous for divergent research studies in order to evaluate the interior morphological approaches of other deconstructivist architects.

Chapter 4

DISCUSSION OF THE FINDINGS

Based on the analysis of the cases within the previous chapter and evaluated them in view of the characteristics of the deconstructivism and forming operations of the interior morphology, one finds that the deconstructivist architect is not strict with a single characteristic of deconstructivism, some of them concentrate on a deconstructive concept in a project and he might be hailed it as an essential notion of the conceptual process of a project. For instance, Tschumi had focused on the concept of *'Iterabilty'* through his morphological approach in Parc de la Villette, he adhered by the context of the park and he utilized the reiterated the red elements which called *'Follies'* multiplied spread on the site. On the other hand, the architect might be used a deconstructivist notion as a supplemental notion for the project such as the project of Wexner by Eisenman, according to the former chapter, within the internal spaces of the building a hanging column does not touch the ground as well crossing beams with a meaningless structure according to the author interpretation that reflects the deconstructivist concept of *'Free-floating Signifiers'*.

Accordingly, the architectural morphology of deconstructivism has sprung from the notions of deconstructionist philosophy, whereas the deconstructivist architects found themselves while executing their projects, consciously or unconsciously, using the conventional forming operations through their designing approaches for the internal morphology for a project, in order to achieve their goals of the philosophical

background for a building. These operations of architectural morphology for the interior spaces are the translator components of the deconstructivists' morphologies of the interior spaces through the analysis in the previous chapter.

Nevertheless, the evaluation for the selected architects' approaches by using an exploratory study approach through two public projects for each one of those deconstructivist architects within the former chapter (The Wexner Center for Arts and City of Culture of Galicia by Peter Eisenman, Parc de la Villette, and The Alesia Museum by Bernard Tschumi, The Jewish Museum of Berlin, and Military History Museum by Daniel Libeskind), tended to find out the architectural morphology of an interior space for a deconstructive project would be generated, accordingly lapping the subjective thoughts beyond a deconstructed space to make it realized by the mind of the readers, by using morphological translator, which are the architectural operations of the form, which employed in a way or another by the architects through executed their deconstructive thoughts on a place. Hence, the following table illustrates that a combination of the evaluative and classification tables for each case study done in the former chapter, which integrated to get the results of the interior morphological approach for each selected deconstructivist architect (Table 12). Notwithstanding, it is worthy to mention that is the aim of this thesis, is understanding the morphological approaches of the deconstructivist architects, thus, the aim would not be exceeded without owing to an elaborating the interior spaces of their projects.

	Characteristics of Deconstructivism									Formin	g Ope		ns of In Arphol		r Arch	itectu	Morphological Approach of The Deconstructivist Architect				
	Case Studies	Non-centrality of construction	Presentness	Free-floating Signifiers	Paradoxes	Trace	Superimposition of layers	Difference	Iterability	Deconstructing Binary opposition	Shear	Bending	Fragmentation	Controlled Chaos	Addition	Layering	Superimposition & Superposition	Torque	Biomorphic	The interior morphology of the project	The morphological approach of the architect
man	The Wexner Center for Arts	~	✓	~		~	~	~		~	~		~	~	~		~			The architectural morphology of the interior spaces is confused, it seems simple and hard to read at the same moment.	
Peter Eisenman	The City of Culture of Galicia	~	\checkmark		~	~	~			~		~	~	~	~	~	~		~	The interior morphological approach is sort of comprehensible and one would see the interconnection between exterior & interior spaces.	
Schumi	Parc de la Villette	~		~	~		~	~	~	~			~	~		~	~	~	~	The morphological approach of this project kinds of intractable, not easy to get the interrelation of its follies together through utilizing the concept of Iterability.	An extraordinary morphological approach of Tschumi chiefly is the park. Most of the deconstructivism's strategies are employed in various ways. While Daniel Tschumi has concentrated on the notions superimposition of layers & iterability. Libeskind's morphological approach has a passion through uncanny exterior forms accompanied by a boldly
Bernard T	Alesia Museum					~		~				~	~	~	~			~		The deconstructing approach between the interior & exterior spaces is boldly clear, besides the torqued morph of the interior space may give a sense of familiar space.	
Daniel Libeskind	The Jewish Museum	~	√							~			~	~						Zigzagging external form is reverberated on the interior morphology, besides the concealed main entrance within the original classical building that might mystify the visitant	
	The Military Museum	~	✓					~		~			~	~	~					The interior spaces of the new extension 'the wedge' have a starkly morphological approach to share the military history moments.	His approach centralized on the notion of the absence.

Table 13: The morphological approach through the interior spaces of selected architects.

According to this evaluation table (Table 13) for the architectural morphology within various internal spaces procreated by Eisenman, Tschumi, and Libeskind. Hence, it is shown that there is a harmony through the morphological approach of three of them. For instance, some characteristics of deconstructivism and forming operations of interior architectural morphology were used by all of them such as the concept of 'Non-Centrality of Construction' is elaborated notion by the three architects through their projects. Though, each one reflected this concept into the interior morphology in boldly distinct, meanwhile, they borrowed various forming operations through generating such uncanny morphs based on what has been analyzed in the former chapter. On the contrary, other deconstructive concepts and forming operations are not provided through some of their interior spaces of a project, accordingly, an illustration of these elements for each one of the selected architects.

For, instance, Eisenman had abandoned using the concept of '*Iterability*'; and the operation '*Torque*' also is not obvious within the internal morphologies through two of his public projects. Meanwhile, Tschumi's morphological approach is skipped off the '*Presentness*', besides, there is no obvious sign of using the operation '*Shear*' in designing the park. In spite of Libeskind has an distinct deconstructive approach, yet, there are many concepts of deconstructivism not clear within his interior morphological approach through the evaluated projects in this research, at the same time, other characteristics were boldly represented by his morphological interiors of these projects, likewise for the morphology operations through generating interior spaces, there is a strongly attended through his morphological approach, while others abandoned for those assessed museums.

Chapter Conclusion

The central conclusion of this evaluation is that there is a tangible platform responding to the aim of this dissertation. There is no single materialistic approach of the architectural morphology through the interior spaces for Peter Eisenman, Bernard Tschumi, nor Daniel Libeskind. Additionally, each one has tended towards creating profound ideas and executed them via using various morphological approaches during generating an architectural form, which indirectly been procreated for representing one or several deconstructivist characteristics. Well, it is worthy to assert that this process would not be carried out without elaborating several conventional form operations, either were consciously or unconsciously operated by the deconstructive architect, which escalated those operations to be as a tangible translator elements, which used towards breaking down the concrete background of the subjectively approaches of the philosophical platform of the deconstructivist architects', these criteria employed forwards evaluating such morphological approaches, in order to provide a comprehending objective language of the transferring from deconstructing texts of linguistics philosophy by Derrida to turn into a dismantling the language of the architecture and its architectural morphology.

Chapter 5

CONCLUSION

The thesis within this chapter, as expressed in the architectural morphology of internal spaces that approached by selected deconstructivist architects. The theoretical background of the study showed that there is no clear definition of the philosophy of deconstruction through diving in the relevant materials, also, the essence of the deconstruction as an intellect is all about pushing the boundaries of traditional thoughts, taking in consideration of the contextual factor, either past, and future, in other words, dismantling and displacing all principles of the conventional morphology, in sense of looking for the pureness from classical ornamentations or external embellishments that situate the idea of 'purge' in an incompleteness in a completed structure, which gives thoughts of suspicious locus. For this reason, nor the philosopher who coined it or any other participants announced that any absolute words could be mirrored a comprehensive meaning of deconstruction which has been provided previously.

Clearly, deconstruction has principles while deconstructing the texts in linguistic, it is important to note that not all of those principles are inapplicable in the translation to architecture through a collaboration between the philosopher Derrida and the architects such as Eisenman, and Tschumi, particularly, within the project of Parc de la Villette. The thesis primary research problem was based on curiosity; in which architectural morphology of internal spaces and deconstructivism architecture are mysterious and so laborious to comprehend its strategies that were employed by several deconstructivist architects who attracted the attention of the world but lacking consistent objective description of their approach to their designs. The focal point of this thesis is to deliberate on the transfer of subjective aspect of deconstructivism to the objective aspect of deconstructivism. The probe of architectural morphology of interior spaces within the thesis, tries to find the connection between deconstructivism interior morphology and conventional interior morphology within the works of various deconstructivist architects. Therefore, the main focus is to provide more clarification on deconstructivism architectural morphology.

However, to provide a foundation on which the ideas of deconstructivist architects would objectively represented in the interior morphology, would provide answer to the research question of the thesis, which "How are deconstructivist architects representing their ideas in an objective way through the architectural morphology of interior spaces?"

The study concentrated on the morphological approach of deconstructivist architects within the internal spaces of public projects, which generated by Peter Eisenman, Bernard Tschumi, and Daniel Libeskind, yet, an adaptation of three phases of analyses to accomplish the aim: The first phase, which is base of the study, is reviewing the literature through utilizing a descriptive approach, and provides an information bank about the philosophy of deconstruction, principles, deconstructivism, characteristics, conventional form operations, a background to the selected architects and a brief backdrop of philosophical point of view towards architecture for each one. The second

phase, an explorative approach employed to analyse two public project for each single architect, thereby, a framework was procreated by the author based on three different approaches, Hoteit, which is supported the subjective side of the research, besides Moffett, and Ching, which are reinforced the objective side. The third phase, evaluative approach of the morphological approach for each selected architects through the internal spaces of the various case studies.

As a result of the various analyses of the dissertation it would be observed that; the interior morphological approach of the deconstructivist buildings might be confusing and difficult to comprehend its environmental form, due to divergent approach of the architectural morphology in deconstructivism by the architects. Furthermore, there is no single materialistic approach of the architectural morphology through the interior spaces for Peter Eisenman, Bernard Tschumi, nor Daniel Libeskind. Additionally, each one has tended towards creating profound ideas and executed them via using various morphological approaches.

The two public projects cases were selected for each architects of the three, which are Wexner Center and Galacia Museum by Peter Eisenman; Parc de la Villette and Alesia Museum by Bernard Tschumi; Jewish Museum and Military Museum by Daniel Libeskind. Accordingly, the analyses of this phase included two approach, explorative and evaluative, in order to find out the morphological approach individually within spaces. Based on the aim of this study, which is producing a tangible base of the morphological approach of deconstructivism architecture. Thereby, the objectively bank of this research would not be accomplished without the evaluative stage. Based from the research problem, which is struggling to comprehend the morphological approaches for such deconstructivist architects within indoor spaces of projects. However, this thesis can serve as a bank for studies that require objectively analyses approach for deconstructive morphological approach of the design of the interior spaces by any deconstructivist architect. Hence, the interior architect and students after getting the idea of the deconstructivists by dismantling the present architectural thoughts and carry the absence unless there is nothing defer it. The study criteria of evaluate the architectural morphology of the selected architects through interior spaces, in order to thrive a fully comprehending of the deconstructive forms and how it approached, thereby, these criteria can be utilized by other authors whether interior architects or even architects, it would help them through breaking down the difficulties of understanding the architectural morphology of interior spaces done by deconstructivist architects.

Due to the delimitations of this thesis, it is focused three morphological approaches of deconstructivist architects through interior spaces, Peter Eisenman, Bernard Tschumi, and Daniel Libeskind. However, there are other architects considered to have adopted deconstructivism morphological approach, which is evident in the result in numerous projects they have executed. Therefore, it will be imperative to also objectively evaluate the deconstructive morphological approach adopted by those architects.

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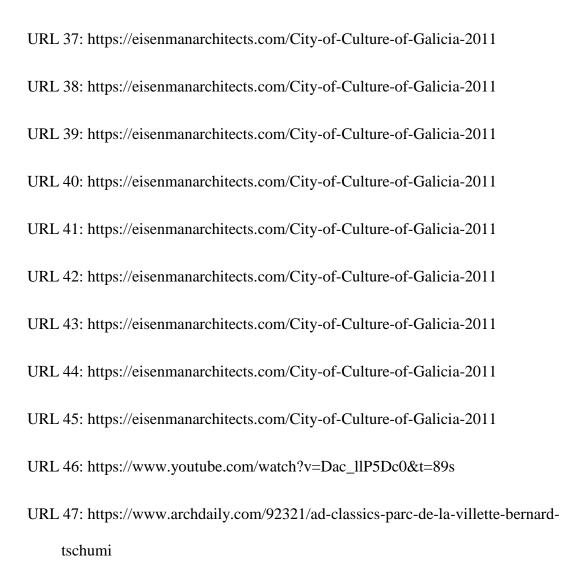
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