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# **URBAN TECTONIC:** Analyzing Study of the Urban Formal Strategy with a Fictional Tectonic Aspect

التكتونية الحضرية: تحليل دراسة الإستراتيجية الحضرية الشكلية ذات الجانب التكتوني الخيالي

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## KEYWORDS

#### ABSTRACT

Architectural Tectonic, Urban Tectonic, Urban Formal Strategy, Tectonic Aspect, Fictional Architecture. Today, Tectonics explains how a specific structural system gains aesthetic values from cumulative experts' advice about construction and architecture. The tectonic of the architecture modern world is seen as a partial strategy synthesizing the "depth" of values of the depth for architecture, beginning with bringing the physical into the metaphysical. In contrast, the urban tectonic refers to the physical into the metaphysical world because of the effacement of that idea through history to the challenges of life today. This paper is concerned with the inner consciousness of the tectonic properties of urban form first by tracing a brief review of theses of contemporary practitioners and theorists. Second, the relation between urban form and the tectonic aspect is discussed as a formal strategy. Third, analysing some distinguish contemporary projects depending on the main concepts deducted from previous knowledge in analyzing. The research reached that urban tectonic as a discipline seeks to present an urban form that can be remembered, a memory of what lies behind the emotional richness and based on the foundation of the formal strategy rather than the traditional rules of architecture and worked to create original and unique forms.

الكلمات المفتاحية

الملخص

التكتونية المعمارية، التكتونية الحضرية الحضرية الإستراتيجية الحضرية الشكلية، الجانب التكتوني، العمارة الخيالية.

تشرح التكتونية اليوم كيف يكتسب نظام هيكلي محدد قيمًا جمالية محددة تم الحصول عليها من خلال نصائح الخبراء التراكمية حول البناء والهندسة المعمارية، وينظر إلى التكتونية المعمارية في العالم الحديث على أنها استراتيجية جزئية تجمع "عمق" قيم العمق للهندسة المعمارية تبدأ بإدخال المادي إلى الميتافيزيقي، في حين تشير التكتونية الحضرية من المادي إلى العالم الميتافيزيقي، وذلك بسبب محو تلك الفكرة عبر التاريخ أمام تحديات الحياة اليوم. تهتم هذه الورقة بالوعي الداخلي للخصائص التكتونية للشكل الحضري أولا من خلال؛ تتبع مراجعة موجزة لأطروحات الممارسين والمنظرين المعاصرين، ثانيًا؛ مناقشة علاقة الشكل الحضري بالجانب التكتوني كاستراتيجية رسمية، ثالثًا؛ تم تحليل بعض المشاريع المعاصرة المميزة اعتمادا على مفاهيم أساسية مستمدة من المعرفة السابقة في التحليل. وتوصل البحث إلى: أن التكتونية الحضرية كفرع يسعى إلى تقديم شكل حضري يمكن تذكره، ذاكرة لما يكمن وراء الثراء العاطفي ومرتكزة على أساس الاستراتيجية الشكلية بل على القواعد التقليدية للهندسة المعمارية والهندسة المعمارية وفويدة من نوعها.

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#### 1. Introduction

The definition of tectonics in architecture is "the science or art of construction, both about use and artistic design." which puts an additional burden on architecture's effective resistance of construction to an art form. A contemporary trend in architecture is tectonic toward scenography representation, which is discussed with the exterior and interior references of any building. Catching the relationship between architecture and urban design is a continuous challenge for urban designers and architects alike, especially with digital architecture, which shows the extreme dimension of tectonics with the fiction form they create. The most challenging for urban tectonic is that it should concentrate on the general conditions of the urban environment (physical, social, political, economic), how it "gathers the fourfold," in Heidegger's terms, and is concerned with the intrinsic properties of urban form (Christiansen, 2017, p. 225).

These referents stand as fragmented entities separated from the whole. Architecture has evolved due to the growing expressive capabilities of ideas related to structural systems. With the multiplicity and accumulation of these ideas, construction turns from a pure system into a transient tectonic system to match the structural and aesthetic functions of tectonics as a mechanism. It shows and reveals the potential to express new values of beauty, construction, function and the urban environment. In this context, it could be distinguishing three different cases of forms show the fictional tectonic aspect: the "scenography object", the "technological object", and the "tectonic object", and that's what this research is concerned with by analyzing some urban design projects.

"Urban tectonics" potential framework, methodologically, could be examined by applying it to analyzing the formal strategy of some urban projects in a descriptive-analytical approach and synthesising the variables in a fictional tectonic aspect for urban design formal products. Studying the two theoretical sides, architectural tectonic and urbanism, is hard because they are theoretically and traditionally unrelated fields. The research determined the research problem emerged (The blurring of the difference in the disciplines of urban tectonics from architectural tectonics with the challenges facing urban design now). The aim of the research represented (Studying the relationship between tectonic theory and urban design to understand the factors required by a fictional tectonic aspect of creating urban formal strategy, focusing on the influential intellectual personality of the designers). This objective was achieved through this hypothesis (Urban tectonics is achieved by distinguishing the urban form from its surrounding context, based on a different formal strategy, not on the nature of the urban project only, but according to the architect's and urban designer's fictional capabilities).

#### 2. Definitions

Tectonics is scientifically defined as the unity of the structural aspects with the architectural and aesthetic characters so that the structural and technical thoughts cannot be distinguished from artistic and creative fictional thinking. Therefore, the structural systems that are the first pillar to reach high-level aesthetical results must be understood, not separated from the structural system. The concept has been defined by many theorists as follows:

Eduard. Sekler<sup>1</sup> defined "tectonics" in phrases of "structure" or "construction". Sekler showed the differences between these terms by defining structure as a basic arrangement of the principles of action. In contrast, he defined construction as a physical manifestation of those principles (Sekler,1964, p.89-95).

Kenneth Frampton 1995 described the concept of tectonic as an artistic construction. It is discussed as a poetic construction. It is a different and unique way of building, as it concentrates here on being one of the aspects of the expression of the aesthetic of architecture (Frampton, 1995, p.78).

Fritz Neumeyer 1991 stated that the essence of the concept of tectonics 'is the quality of coherence and visual expression of the elements and the coherence between the chosen building system and the idea and structure designed (Neumeyer, 1991, p.96-110). According to the theorists, the basic factors of tectonics can be summarized into three main aspects that constitute the "tectonic triad". These aspects are:

- Technique: represented by construction, technology, technology and representation.
- Culture: represented in art and empathy with handcraft and empathy.
- Material: which is represented by science, structure, and ontology.

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<sup>&</sup>lt;sup>1</sup> Eduard Sekler (1920-2017) a Historian and professor of architecture at Harvard University.

This research reached the definition of Architectural tectonics as: It is a way to express the creative thinking of the designer and to show the architectural work that results from the interrelationships between the basic idea of the project, the available technology, and the emotional, aesthetic and artistic aspects within a specific building framework.

## 2.1. Definition of Urban Tectonic

The urban tectonic is different from the architectural tectonic as it's the way that communities and cities are constructed from many pieces or forces, objects, people, and important meanings when they all interwoven into a larger whole of layering systems (Wölfflin, 1994, p.18), Figure (1).

The definition of urban tectonics is a mix of styles from the city's architecture (urban design, landscape architecture, and architectural design). Their employment in formulating the city's design according to an integrated approach to design that links aesthetics, techniques, architectural size and urban form, relying on mechanisms to unify aesthetics and technology in creating architecture. Thus, the tectonic theories in architecture are related to the issue of dealing with atmosphere across architectural and urban scales to meet the future functional, technical and service demands related to the urban public realm. It must be necessarily linked to an in-depth knowledge of the city's story in its parts and smallest details.



A. Wrapped Reichstag- Berlin

B. Mi journey prompt- Prompt Hero

Figure 1. The art of Future city concept, environmental concept art, Source: (National Gallery of Art, 2020).

## 3. Previous Studies

The study of Hvejsel and others mentioned the potential of architecture by re-reading the tectonic theory of F. Sekler. Reviewing Sekler's background in establishing urban design as a discipline in architecture at Harvard in the 1950s and '60s gave freedom to the critical linking of architecture and urban design, as well as façade and volume, in a mechanism to deal with the human scale. The re-reading led to the methodology of analyzing and synthesizing the design that we impose in our urban design program. The urban tectonic should strengthen structural and spatial relations between the interior and exterior of buildings with the urban space. The study suggests that urban tectonic is a gesture to an aesthetic understanding of space (Hvejsel, 2017, p.5-9).

The study of Christiansen emphasizes renewed engagement of the built environment with the fragile ambience that appears. The main question of this study is: How do sustainable designs create livable, sensory, and experience-rich urban environments? The study looked at "how the theory of tectonic accomplished architecture as a mixture of form and structure, ensuring urban tectonics as a solution to improve the atmosphere of urban design. This study outlines a package of basic rules for urban design through an 'urban tectonic' approach. Observations in the specific case study put a conceptual framework that provided for developing, arguing, and increasing the feelings of relief in urban environment easily by linking it to the details of spatial structure and the constructive solution across the whole urban scale (Christiansen, 2017, p.2-17).

The study of Doran concerned with the challenges that urban design faces in the public realm clarified that the physical elements of the construction system in urban tectonic include the physical building stock of the city, besides all parts of the hard infrastructure of the city, such as highways, bridges, roads, and utilities. This physical infrastructure includes management systems of gas, electricity, stormwater, and potable water. The hard infrastructure of the city also includes the physical components of public

transportation, such as buses, bus stops, benches, signage and the physical building stock of the city (Doran, p.18-22).

The study of Robert Maulden demonstrated in its hypotheses about tectonics that any form or building with a holder of fundamental properties has its own story and display. The physical characteristics of a building -such as organization, structure, services, materials, detail, and its method of configuration and construction – all conjure up meta-physical presence. Then, it (the building) could appear as a "thing" instead of a "sign." shortly, tectonics concerned with the apparent inter-consciousness respectfully to its construction, the study referred to the capacity of tectonics as a kind of "depth-ness". The hidden message may give a diversity of interpretation, rather than gaining meanings or timeless uniqueness, and the capability and potentiality of changing in those meanings, with more productive to paradoxical tectonics in architecture that depends on the acquisition messages of those signs (Robert, 1986, p.10-23).

The previous studies showed the lack of theories and methods that enable us to join forces in this matter and methods that allow us to study volume and surface, space and construction, movement and motionlessness simultaneously. It helps to clarify the disciplines of creating urban form. By referring to the methodological implications of the task of the tectonic of unifying aesthetics and technique in the creation of urban design, this paper argues that tectonic theory offers a unique potential to build a formal strategy for creating urban forms. So, there is a need to review tectonic theories as the next.

#### 4. Tectonic Theories

Around 1850, in architectural analysis and criticism, the tectonic theory was applied as a means. By the nineteenth century, Schinkel revealed the secrets of tectonics, and with his rediscoverer of the 'Analogia,' the analogy had grown into an important thought in Greek architecture. In general, thinking about architecture, Greek architecture established the greatest kind of expression of tectonic because Greek architecture's elements were deeply linked with its structure, and they used to symbolically express the mechanical functions of the construction's parts that achieved support, countering pressure and carrying a load.

According to Gottfried Semper's theory, the tectonic framework represents a cultural practice and is an important part of revealing this culture. It mainly deals with the form of architecture and its relationship to its culture. Semper links tectonics as a concept with materials and handicrafts, especially lightweight materials that are usually structured and formed by hand (and that's what the craftsmanship of old architects means), starting from the simplest structural materials. Available in nature as wood material (Al-Alwan, 2020, p.2-5).

Heidegger, in his book "What Is a Thing?" In 1967, he mentioned that the building in its story tells the life, the technique it was made of, how it stands, and its uses, creating a process with respect and admiration for the used technology and artisans, etc. The essential properties of any building, like the systems of (services, structure, materials) are the physical things a building makes up (Heidegger, 1967, p.33). Tectonics appears in an instant of the presence of these physical matters when the physical surely becomes metaphysical. Thinking of architecture as Things is useful to uncover life in how it formed, about their entities and historical conditions. A building's relationship as a thing, -- in its inner consciousness, is an extended matter to its surroundings, and its inner consciousness is considered a holder of its properties (Christiansen, 2017, p.4-11). And I see here where urban Tectonics enters.

According to the aesthetic and critical theory of John Ruskin, architecture is a living entity. He believed in his admiration for the Victorian architectural style that the soul of architecture was shown in the shell of decoration covering the exterior walls. Besides that, he argued that the formation of the decorative cover displays qualities of textiles and dresses. This concept was formulated as Ruskin's theory of the adorned "wall veil." the theory attempted to shift the ontological identity of architecture. Ruskin argued that the tectonics of architecture is a technique used to create the form (analogous to dress and textile). This technique depends on the following: First, the wall represents the essence of architecture and not only the building block. Second, through the metaphors of lifting, cutting, shrinking and gathering, Ruskin revealed architecture's tectonic language and transformed it into a language of tailoring and upholstering (Chatterjee, 2009, p.71-91).

For Le Corbusier, tectonics lay in his vision. For him, the solution to a new city problem is a complex design of a big compact city, prepared from start to finish by a single designer. His ideas about city planning

adhere to a commitment to geometry that results from his approach to architecture about the "complex art of building" (Steyn, 2012, p.83-106). He mentions that "architecture was a very fine play of solids in light", and the architect has to give life to the surfaces of these solids. Besides that, "man's tranquillity and health were influenced by geometric form", which is why Le Corbusier's ideas on city design were considered based on solid geometry and unified design that includes building axes, right angles and simple square shapes (Dzwierzynska, 2017, p.95; Foster, 1983, p.66).

# 4.1. The Transition from Classical to Digital Tectonics

The digital tectonic is a methodology for creative design, especially for architecture and urban design, emphasising the integration of technical aspects and aesthetics or a combination of abstraction and complexity. It is described as a poetics of digitally designed, structurally illustrated and straightforward fabricated architecture. Digital tectonics is an integrated process matter, and it is not contained in technology or the modernization of traditional terminology. Still, it is a new will of thinking about architecture (Mallgrave, 1994, p.19-22).

Architecture entered a new era at the end of the 20th century after publishing Frank Gehry's design for the Guggenheim Museum in Bilbao, Spain. Frank Gehry used digital technologies, which gave the chance to start a new era for the geometry of free-form, and the digital architectural form emerged. With the help of arithmetic, new forms, materials, and constructional methods were developed to realize new possibilities for ideas or forms. It seemed to interpret the dynamic status of digital production, raising the need to introduce a new tectonic variable that generates, interprets and improves the architectural form. Digital aids, besides classical tectonics, create a new type of tectonics known as digital tectonics (Marie, 2016, p.1-30), Figure (2).



A. digital architecture of Frank Gehry.



B. urban form of generative algorithm of Zaha Hadid.



C. Coney Island, skyscrapers, Manhattan of Rem-Koolhaas

Figure 2. Fictional contemporary urban forms, Source: (Visser and Lu, 2016).

# 5. Conceptual Framework of Formal Urban Strategy

This section aims to make the urban tectonic a wider frame of fictional aspects by determining the variables and indicators to measure the presence of the manifestation of tectonic rather than a substitution for an absence in the strategy the designer took in his urban project.

The research found that the tectonic is considered something unmeasurable; the expression of construction and structure should be the factors from which the earlier practised qualities are taken rather than the physical instance of the construction itself. This experience can be correlated with the idea of empathy. In art and architecture theories, empathy is considered a notion that describes the phenomenon in which any individual not only reads interesting moods in the experience of our surroundings but also relates to the process of architecture and urban design creation (Christiansen, 2017, p.9).

Architecture is a limited force, but we can join elements to achieve the expressive desired product we recognize as a "declaration of a conscious soul" (Doran, p.21-23).

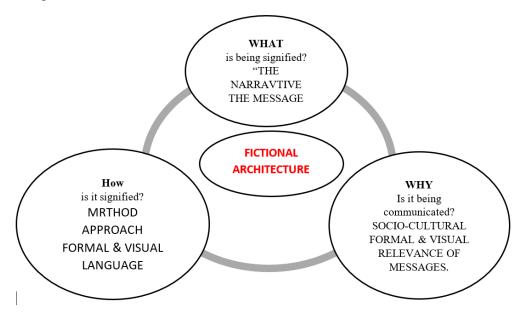
In that context, the case study was adopted processing on two parallel tracks: a theoretical, conceptual track linking urban design and tectonic architectural theory by analyzing the distinguish fiction of architects' thinking and an analytical method that studies can be applied to check for if this framework in a formal urban strategy of fictional urban aspect.

# 5.1. Fictional Architecture and Urban Design

Fiction means any creative work that tells a story that does not come from reality, embodying philosophical ideas. The foggy world between art and architecture exists where fictional architecture exists, and in that world, when reality is stopped, artistic buds flourish. Architecture often works to communicate that story written as fiction for futuristic or fantastical stories.

Regarding Fictional Architecture, the significance and the impact shown in the buildings represent and symbolize how people think, and significant architecture in the urban public realm stands out as an attractive symbol of sources with attractive meaning (Kanpillewar, 2019).

Today's great technological inventions and materialistic evolutions came from Parallel universes, fantasy, science fiction, and superhero fiction. They are all notions the designer applied to reality in fictional novel ways. The new and cutting-edge technology with techniques, for example, artificial intelligence, virtual reality, 3D printing, etc., certainly helped architects in merging fiction into their designs, and that put fictional architecture in a triple relationship of (WHAT-HOW-WHY) (Çağdaş, 2009, p.167-173). Figure (3) and Figure (4).



If the WHAT and WHY are studied, the HOW will make sense i.e. if the content and the intent of the messages is leamt then the means of its delivery would become more comprehensible.

Figure 3. Diagram representing the relationship between, Source: (Kanpillewar, 2019).

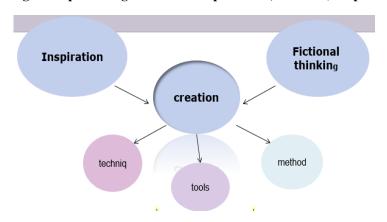


Figure 4. Disciplines of design strategy Fiction architects, (Source: Authors).

Architects and urban designers identify themselves or others as superhero fiction. All fictional designs can be interpreted using a basic fictional rule: impossible "what if" imaginative scenario and the fiction aspect explores "how to design scenarios" that can be used to forecast different futures to enrich and improve the distinguished elements of architecture. Usually, these superheroes of superior ideas, such as idealism, enrich the value of design. For instance, Plug-In City first appeared in Archi gram (1964), a unique example of the avant-garde architecture of its day, as a "speculative series of concepts for a computer-

controlled city built for change with removable pieces connected into a "megastructure" service framework." (Ribeiro, 2006), Figure (5).

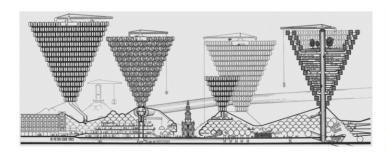




Figure 5. Archi Gram's Plug-In City Concept, Source: (Peter Cook, 2013), © All rights reserved. ArchDaily 2008-2024.

## 5.2. Material and Method

The expression of tectonic fiction uses the material of the syntheses of the case study coming from a question (How can we, as architects and urban designers, look behind the physical forms and consider the potentiality of the urban tectonic?), thus, by searching in the representation of tectonics in these projects. This important representation makes it obvious that the relation of signification should be seen.

The analysis of urban tectonic disciplines is concerned with the urban configuration masses and the following issues: the characteristics of the project, the conceptual background of the designer, the concept, materials and techniques, the mechanism, and the configuration. Table (1) and Table (2). Exploring the urban formal strategies that the designer takes to turn out in these stages, Figure (6):

- Stage 1- The stage of thought formation for the architect.
- Stage 2- Moving to the embodiment of personality and the thought in realistic actions like design.
- Stage 3- analyzing the productive act of urban entity depends on the subjectivity of tectonic that the designer submits to his products.
- Stage 4- the techniques of the fictional tectonic disciplines.
- Stage 5- exploring the tectonic characteristics that appear when adopting the formal design strategy, the discipline of mechanisms, and the architectural elements the designer adopts.

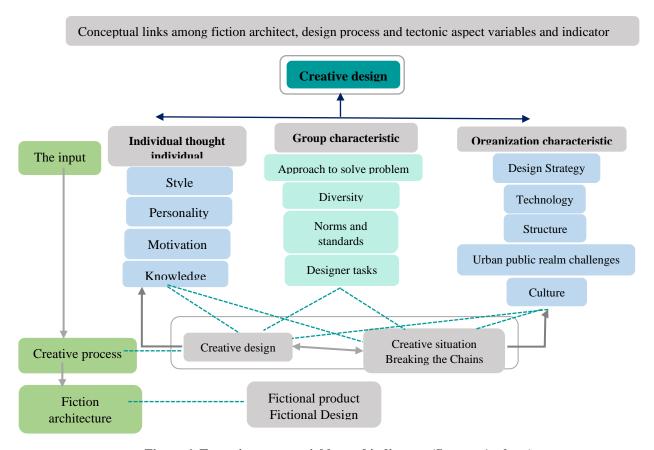


Figure 6. Tectonic aspect variables and indicators (Source: Authors).

# 6. Analyzing the Formal Urban Strategy of Fiction Tectonic Aspect (case study urban projects)

Building a formal strategy based on the tectonics aspect for any urban design requires referencing the intellectual background behind the urban form and exploring possible mechanisms and techniques that lead to distinguish fiction. For this reason, the research chose three architects (next on) who are creative and distinguished in their fictional production, whether artistic or architectural and unfamiliar with urban form within its context.

# 6.1. The Development of Culver Cities of Architect Eric Owen Moss

The Los Angeles architect Eric Owen Moss (1980) directed the Southern California Institute of Architecture and was once called a "jeweller of junk". He considers Architecture not as a confirmation of imposing order and control but as a celebration of our sensation and perceptions of the play of architecture. He explains what he as a basis complexity from the advertisement of human changes. And in this direction, he challenges us to rethink architecture.

Thus, complexity through invention is a major theme in Eric Owen Moss's work. For Moss, architecture is a celebration of our hiding experiences; if architecture leads us to the complexity of the world around us, the architect has to continually invent his fictional designs to displace the circumstances of each Project (AIAU Courses, 2021).

Eric works to develop a strategy to reform the industrial zone, benefit from its built assets, dispose of its social and economic obligations, and conceive a formal concept for a new model for urban incentivization in advertising digital media even if one building changed at a time like the warehouses were transformed into places for creativity that can be appeared individually. Analyzing the formal urban strategy of the Project in Figure (7), Table (1).



Figure 7. Pictures of the Development of Culver Cities of Architect Eric Owen Moss, Source: (Peter Cook, 2013), © All rights reserved. <u>ArchDaily</u> 2008-2024.

Table 1. Analyzing the urban formal strategy of the development of Culver Cities of Eric Owen Moss, (Source: Authors).

	- Complex shapes and blurred borders
Configuration	- The use of overlapping forms of concrete, glass and steel structures
	- Molten and fluid forms
	- Moss would make the buildings usable as office space for design companies and tear them
Techniques	open at the corners or along the roof, only to re-seal them with glass or leave their trusses
	exposed
	- Materials and forms Were layered and thrust together
	- megastructure used in most projects
The Mechanism	-The effort went Very much against the grain of architectural history, experimental
	designs have generally taken place in the residential sphere
	-Moss, by contrast, hoped to burrow deeply into an overlooked and built-out industrial
	neighbourhood and transform it from the inside out
The Concept	
	<u>.</u>
The Characteristics	
of the curver city	
	*
	-Moss focused on the most attractive urban point in the project; this point is the Collective value of these singular architectural works as a progenitor of radical urban transformation in the neighbourhood  Quotation from Moss: "I'm really interested in time and space"  - To think of scattered properties of "Pearls on a string" and develop them one by one as office space for creative tenants and as catalysts for a larger reinvention of Culver City  - Architecture is an ongoing dialogue between contrasting forms, and because architecture is the largest art form put in these very different-looking buildings, and they will attract your attention Moss has turned a section of Culver City, a small city wedged between Los Angeles and Santa Monica, from a declining warehouse district into a thriving beehive of architectural experimentation that doubles as an enclave for creative-class companies in advertising, digital media and the arts, (Called Hayden Tract). The projects represent a wide array of architectural and technical achievements that have been discussed, published, awarded, and studied worldwide

# 6.2. The Ground Zero | World Trade Centre Master Plan, Studio Libeskind

Daniel Libeskind was born in (1946) in Poland and received a scholarship to study architecture, where he moved to America and obtained an architecture degree in (1970). His idea of architecture made him one of the avant-garde architects, as he criticized the rules of traditional architecture and worked to create original and unique forms. For him, the dynamic form of forms is overcome by their natural deformation through a kind of Hippocratic that refers to historical or philosophical sources. The influence of his upbringing as a professional performer has its roots in Libeskind's early designs, Figure (8).

His projects are urban influential, as they are the nucleus for urban development by adopting the infill style in a manner of antagonism by telling a story that embodies his ideology adopted in most of his projects that work to show the emotional enrichment of the building and the place. And because he was one of the pioneers of the deconstruction movement, with buildings that reflect the qualities of the contradictions between the past and the present, disassembled blocks. The manipulation between masses and space the difference from the general character of the surrounding buildings (Was, 2015, p.99-121). Analyzing the formal urban strategy of the Project in Figure (9), Table (2).

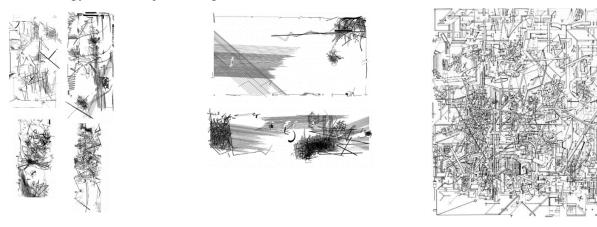


Figure 8. Some painting works of Libeskind, Source: (Was, 2015).



Figure 9. Pictures of the ground zero World Trade Center Master Plan of Studio Libeskind, Source: (Vinnitskaya, 2012), © All rights reserved. <u>ArchDaily</u> 2008-2024.

Table 2. Analyzing the urban formal strategy of the Ground Zero World Trade Center Master Plan of Architect Daniel Libeskind (Source: Authors).

Configuration	- Embodying the steadfast forces in the face of terrorist attacks by investing in the mud line -Establishing a memorial and museum to immortalise the memory of victims of the terrorist act and be the centre from which life emanates to the project - Emphasizing the centrality of the project by directing the masses of buildings and their slope towards the centre and surrounding the centre with a museum frame, emphasising the site's emotional legacy
Techniques	-Clarity, as half of the project area was exposed without building, to clarify the impact of terrorist events on the people and the place, to tell the story, and to give a beautiful view to passers-by in the place  - The towers are located relatively far from the open space to not obscure the garden and cast shadows on it

The Mechanism	<ul> <li>Opening a traffic path from Greenwich Street to provide an access point from Point Hill to the open area of the project, thus allowing access to the Project from Greenwich Street.</li> <li>Study the orientation angle of the buildings carefully so that they are symmetrical with the Statue of Liberty to create a complete view</li> </ul>
The Concept	Commemorating a site that held rich emotions and a telling story  - It is similar in shape to the torch held by the Statue of Liberty  - Narrative in the heart of the place (Narrative of the event) by adding the performing art building to stimulate memory and tell the story of the place rich in emotion  - Confirmation of the concept of freedom through the first tower with a height of 1776, which reminds us of the date of signing Declaration of Independence, the first official document of human rights
The Characteristics of the Culver City	In 2002, Lower Manhattan Develop-mint Corporation (LMDC) announced a competition for a master plan to develop 16 acres in lower Manhattan that had been devastated by the terrorist attack of September 11th. Studio Libeskind's design, "Memory Foundations," won - space for two majors' new public facilities, an iconic new transport Half of the 8-acre area is devoted to public spaces for the memorial and museum -The other half is allocated to sustainable, high-tech office tower sites - He worked to reconnect the historic street network, revitalize the streetscape with aboveground retail and reconfiguration the underground metro line

# 7. Conclusions

Tectonics increases understanding of architecture, which has deep roots in time and place. So, urban products have rich and diverse aspects of cultural determinants in the contemporary modern world.

Urban design as an approach touches on deeper values; it seems to present a new way to challenge the field practising for future architecture to work at the target of making an impact on many problems that face society (socially, economically, and environmentally). The good urban design product shows distinguishing similarity of the urban developed area to the fictional narrative design. The quality of urban form in interacting with the users greatly impacts and improves all experiences in such a place.

Urban tectonics, concerned with detail and joining at a microscale, reveals the whole context by telling the story of itself. The connection of the parts and the context as a whole is essential to the importance of metaphysical issues of tectonics. Thus, urban tectonic includes physical and nonphysical constructions, and both can be seen in the city, either the hidden or invisible systems that lie behind them.

As an intellectual value, Tectonics finds itself opposed to unjustified symbolism as long as the realization of the architectural and urban production includes the idea that it has a long diploma. Hence, the designer must produce forms in which human and technological thoughts are integrated into the system to reach creative production.

The model the research builds for the formal urban strategy of fictional tectonic aspects should describe all urban products. Still, these subjects would be dealt with alone when this strategy depends on other variables with different indicators.

The fictional tectonic aspect appears when the designer falls his ideology on all his projects, as his ideology stems from his nationality and religion strongly. His ideology is individual, but he harnesses it to serve the community. He is completely isolated from other architects. He embodies his ideology by telling a story; he believes every site is a story, history, and an emotional legacy that must be told.

The fiction architect seeks to present an architecture that can be remembered. Memory is the foundation (shifting stones). For him, architecture is not the building or even the site, but rather what lies behind the site of emotional richness and what this is based on; memory is the designer's use of his techniques: the use of bold contemporary shapes and modern advanced structural materials to express his ideas and non-traditional configurations.

The urban concepts of architect Moss concerned creativity, synthesis of ideas, and representation. He achieved this by incorporating these concepts into a number of basic ideas with significant overlap between them, as a complex universe of ideas from disparate fields such as history, biology, engineering, computation, nature, and politics were often the main sources of ideas for basic urban concepts, and that other fields provided ideas. To shape and improve it. Urban tectonics resulted from Moss's innovative design ideas about industrialization changes and the advancement of digital technologies for architecture on the one hand, and from other treatments that may be of culture, location, or volumes by including them

in the elements of the city using physical characteristics and details of modern materials, construction, and technology.

The architect Libeskind formed his product strategy as a unique fiction architect with advanced ideas and distinguished techniques, so he greatly benefited from tectonic theory as the main approach to embodying ideas for architecture. The aspects of inspiration were between context and history, as he believes in accumulating knowledge. His method involved relying on the context in generating designs, preserving the place's cultural heritage, and harmonizing with the surrounding urban scenes. The mechanism was between the compatibility of the surroundings with the design and the diversity in the buildings (concerning urban design).

#### **References:**

- An overview of Fictional architecture. <u>URL:https://www.re-thinkingthefuture.com/rtf-architectural-reviews/a8732-an-overview-of-fictional-architecture/</u>
- Anne Beim Marie, Frier Hvejsel, (July 2016), "The ecology of urban tectonics studied in everyday building culture of Hans Christian Hansen". <a href="https://doi.org/10.1201/b20891-30">https://doi.org/10.1201/b20891-30</a>
- Anuradha Chatterjee, (March 2009), "Tectonic into Textile: John Ruskin and His Obsession with the Architectural Surface", Cindrebay School of Design. <a href="https://doi.org/10.2752/175183509X411771">https://doi.org/10.2752/175183509X411771</a>
- Architecture is a Language: Daniel Libeskind at TEDx DUBLIN <a href="https://issuu.com/ruchitakanpillewar/docs/ma\_thesis\_ruchita\_kanpillewar">https://issuu.com/ruchitakanpillewar/docs/ma\_thesis\_ruchita\_kanpillewar</a>
- Cezary Was, (January 2015), "Practicing Theory; Concepts of early works of Daniel Libeskind as references for real architecture. https://doi.org/10.11588/quart.2015.2.65399
  - Curtis William, (1983), "Principle vs. Pastiche Modern Architecture Since 1900", Prentice-Hall, Inc.: Englewood Cliffs, New Jersey.
- Elias Melvin Christiansen, (October 13th 2017), "Tectonic perspectives for urban ambiance? Towards a tectonic approach to urban design", Publisher: Direction Générale des Patrimonies DAPA MCC, UMR 1563 Ambiances Architectures Urbanites (AAU).
- Fabíola M. Ribeiro and Rejane Spitz, (September 2006), "Archi gram's Analogical Approach to Digitality", International Journal of Architectural Computing, publisher: Sage journals, volume.
- Frampton, K., (1995), "Reflections on the Scope of the Tectonic in studies in Tectonic Culture: The Poetics of Construction in 19th and 20th Century Architecture ", The MIT Press. <a href="URL:https://www.academia.edu/8398239/Studies">URL:https://www.academia.edu/8398239/Studies</a> in Tectonic Culture The Poetics of Construct ion in Nineteenth and Twentieth Century Architecture Graham Foundation for Advanced Studies in the Fine Arts
- Frank Gehry: Design Philosophy & Process, "Detailed Investigation on Frank Gehry: Gehry's Philosophical Approach". URL: frankgehryproject.blogspot.com/2012/10/gehrys-philosophical-approach\_16.html
- Fritz Neumeyer, (1991), "The artless Word: Mies van der Rohe on the building art": translated by Mark Jarzombek, The MIT Press Cambridge, Massachusetts London, England.
- Gerald Steyn, (2012), "Le Corbusier's, "town-planning ideas and the ideas of history", Tshwane University of Technology, SAJAH, ISSN 0258-3542, volume 27, number 1.
- Gülen Çağdaş, Birgül Çolakoğlu, (September 2009), "COMPUTATION the new realm of architectural design"; An Emergent Form Generation Method for Supporting Conceptual Design, Cenkler Printing, İbrahim Karaoğlanoğlu Cad. Civan Sok. No:7 4.Levent, Beşiktaş, İstanbul ISBN 978-0-9541183-8-9 ISSN 2684-1843.
- Hal Foster, (1983)," The Anti-Aesthetic: Essays on Postmodern Culture, Bay Press: Port Townshend, Washington.
- Hoda Al-Alwan, Yusur B Mahmood, (2020), "The Connotation of Tectonics in Architectural Theory", The Fourth Postgraduate Engineering Conference IOP Conf. Series: Materials Science and Engineering, 745 012161 IOP Publishing. <a href="https://doi.org/10.1088/1757-899X/745/1/012161">https://doi.org/10.1088/1757-899X/745/1/012161</a>
- Jolanta Dzwierzynska, Aleksandra Prokopska, (2017), "Urban Planning by Le Corbusier According to Praxeological Knowledge", World Multidisciplinary Earth Sciences Symposium (WMESS 2017) IOP Publishing IOP Conf. Series: Earth and Environmental Science. 052007 https://doi.org/10.1088/1755-1315/95/5/052007

- Kanpillewar, R., 2019. ARCHITECTURE IN FICTION [WWW Document]. Issuu Inc. URL <a href="https://issuu.com/ruchitakanpillewar/docs/ma\_thesis\_ruchita\_kanpillewar">https://issuu.com/ruchitakanpillewar/docs/ma\_thesis\_ruchita\_kanpillewar</a> (accessed 8.5.23).
- Mallgrave, H. F. & Ikonomou, E., (1994), "Empathy, Form, and Space: Problems in German Aesthetics, 1873-1893", Santa Monica, California: Getty Center for History of Art and the Humanities.
- Marie Frier Hvejsel, Lea Holst Laursen, Poul Henning Kirkegaard, (2017), "Gesture and Principle in Urban Tectonics An Educational Case Study", Nordic Journal of Architectural Research, ISSN: 1893–5281, ISSUE 1.
- Martin Heidegger, (1967), "What Is a Thing?"; translated by W. B. Barton, Jr. and Vera Deutsch with an analysis by Eugene T. Gendlin, Henry Regnery Co.: Chicago.
- Martin Heidegger, (1977), "BASIC WRITINGS from Being and time (1927) to the task of thinking (1964)", Harper Collins Publishers, 10 East 53rd Street, New York, NY 10022.
- Maulden Robert, (1986), "Tectonics in architecture: from the physical to the meta-physical"; Thesis (M. Arch.) --Massachusetts Institute of Technology, Dept. of Architecture, Publisher: Massachusetts Institute of Technology.
- National Gallery of Art, 2020. Wrapped Reichstag, Berlin, 1971-1995, 1995 [WWW Document]. Natl. Gall. Art-WEB. URL <a href="https://www.nga.gov/collection/art-object-page.101975.html">https://www.nga.gov/collection/art-object-page.101975.html</a>
- Peter Cook, A., 2013. AD Classics: The Plug-In City [WWW Document]. ArchDaily. URL <a href="https://www.archdaily.com/399329/ad-classics-the-plug-in-city-peter-cook-archigram%3E">https://www.archdaily.com/399329/ad-classics-the-plug-in-city-peter-cook-archigram%3E</a> ISSN 0719-8884 (accessed 5.3.23).
- Ruchita Kanpillewar, (September 2019), "ARCHITECTURE IN FICTION: Estrangement, Naturalization and Social Commentary in the Architecture of Contemporary Speculative Fiction Films", a thesis was submitted to University of Westminster, London.
- Sekler, E.F. (1964), "Structure, Construction, Tectonics. In: Kepes, G. (ed.) Structure in Art and in science." London: Studio Vista.
- Vinnitskaya, I., 2012. Ground Zero Master Plan / Studio Daniel Libeskind [WWW Document]. Arch Dly. URL <a href="https://www.archdaily.com/272280/ground-zero-master-plan-studio-daniel-libeskind%3E">https://www.archdaily.com/272280/ground-zero-master-plan-studio-daniel-libeskind%3E</a> ISSN 0719-8884 (accessed 5.3.23).
- Visser, R., Lu, J., 2016. 45. Contemporary Urban Fiction: Rewriting the City, in: The Columbia Companion to Modern Chinese Literature. Columbia University Press, pp. 345–354. https://doi.org/10.7312/dent17008-046
- Was, C., 2015. Practicing Theory Concepts of early works of Daniel Libeskind as references for real architecture. Quart. Kwart. Inst. Hist. Szt. Uniw. Wrocławskiego 36, 98–121. <a href="https://doi.org/10.11588/quart.2015.2.65399">https://doi.org/10.11588/quart.2015.2.65399</a>
- Wiliam J. Doran, "A Hunt for the Urban Tectonic: Deriving Relevant Urban Architecture from the Existing Fabric of our Cities and Communities", Louisiana State University, A Question of Leadership: The Citizen Architect and Public Interest Design.
- Wiliam J. Doran, "A Hunt for the Urban Tectonic: Deriving Relevant Urban Architecture from the Existing Fabric of our Cities and Communities", Louisiana State University, A Question of Leadership: The Citizen Architect and Public Interest Design.
- Wölfflin, H. [1873], (1994)," Empathy, Form, and Space: Problems in German Aesthetics, 1873-1893", published by Getty Center for the history distributed by the University of Chicago press. <a href="https://www.getty.edu/research/publications/pdfs/1994empathy\_form\_space.pdf">URL:https://www.getty.edu/research/publications/pdfs/1994empathy\_form\_space.pdf</a>