

## Metaphysics in Architecture- The Jewish Museum in Berlin case study

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### Abstract:

There are many sources that architects rely on as an intellectual impetus for their inspiration in architecture concepts and projects design. One of the most influential sources is the metaphysical legacies of previous civilizations and religions that shape ideas and conscience and influence the conception of the architecture design ideas. This paper aims to discuss the impact of the metaphysical content of the Jewish religion on the architecture of the Jewish Museum in Berlin designed by Daniel Libeskind. Metaphysics is a branch of philosophy that studies the primary principles of the world. Its branches are based on ontology, which studies the nature and levels of existence, cosmology, which studies the universe and its components, and theology, which studies the existence and nature of God. Metaphysics is linked to the collective memory of peoples through religions, belief systems, stories, and sacred legends. It often tells a reality or a fantasy from which man derives his visions and perceptions of the (absolute) God, the universe and existence that form his cultural background and metaphysical motives. In order to monitor the impact of metaphysics and its branches as an intellectual impulse in the formation of the architecture of the Jewish Museum in Berlin. The paper will follow an analytical methodology to study the expressive and figurative vocabulary of the museum, based on semiology, which depends on the translation of physical forms and symbols, as well as on the philosophy of interpretation to extrapolate the impact and the reflection of the metaphysics of Judaism on vocabulary and the form of the building.

### Keywords:

metaphysics; Semiology; symbols; Hermeneutics.

### الملخص:

هناك العديد من المصادر التي يعتمد عليها المعماريون كحافز فكري لإلهامهم بالأفكار المختلفة التي تساعدهم في إبداعاتهم المعمارية وتصميم مبانيهم المميزة. أحد المصادر الأكثر تأثيراً في هذا الإلهام هو الإرث الميتافيزيقي للحضارات والأديان السابقة التي تشكل الفكر والوجدان والضمير وتؤثر على الصياغة التشكيلية للعمارة. تهدف هذه الورقة البحثية إلى مناقشة تأثير المحتوى الميتافيزيقي للدين اليهودي على تصميم المتحف اليهودي في برلين الذي صممه دانيال ليبسكيند. تعد الميتافيزيقي فرع من فروع الفلسفة التي تدرس المبادئ الأساسية للعالم، وتستند فروعها على علم الأنطولوجيا، الذي يدرس طبيعة ومستويات الوجود، وعلم الكونيات الذي يدرس الكون ومكوناته، وعلم اللاهوت، الذي يدرس وجود الله وطبيعته. ترتبط الميتافيزيقي بالذاكرة الجماعية للشعوب من خلال الأديان، والمعتقدات، والقصص، والأساطير المقدسة، التي كثيراً ما تحكي واقعاً أو خيالاً يستمد منه الإنسان رؤاه وتصورات عن الله والكون والوجود، والتي تشكل خلفيته الثقافية ودوافعه الميتافيزيقي. وستتبع الورقة البحثية منهجية تحليلية لدراسة المفردات التعبيرية والمجازية للمتحف، استناداً إلى السيمولوجيا،

والتي تعتمد على ترجمة الأشكال والرموز المادية، وكذلك على فلسفة التفسير لاستقراء تأثير وانعكاس ميتافيزيقيا الدينية اليهودية على المفردات التشكيلية للمبني.

ستعتمد هذه الورقة نموذج فرديناند دي سوسور للتمايز الذي له مبدأين أساسيان: (١) أن التطور اللغوي يحدث من خلال تغييرات متتالية أجريت على عناصر لغوية محددة؛ (٢) أن كل هذه التغييرات تنتمي إلى منطقة معينة والتي تؤثر إما كليا أو جزئيا. دعي فرديناند دي سوسور الي علم السيمولوجيا نظرية العلامات. ما قصده بكلمة "علامات" هو أي شيء يشير إلى شيء ما بشكل غير مباشر أو هو تذكير به يمكن أن يكون ذلك من خلال قراءة النص، أو الإيماءة، أو الشكل، أو الصورة، أو المبني. "العلامة هي شيء، أي شيء، الذي "يرمز" أو يذكرنا بشيء آخر.

### الكلمات المفتاحية:

ميتافيزيقيا؛ سيميولوجيا؛ رموز؛ هيرمنيوطيقا

## 1- Introduction:

Metaphysics has remained the main factor in shaping human visions and perceptions across different times through religious beliefs, myths, heritage constants, which give a specific connotation of existence, the universe and the absolute. It sets boundaries and social and cultural identity for peoples, which consequently affect their intellectual and materialistic production affected by this vision, and the production continues in a cumulative manner. It is not subjected to personal whims or material changes, but rather to eternal influences that he pledged to himself from the beginning. Metaphysics established a set of general perceptions and concepts of society. These eternal influences of metaphysical constants in their succession from one generation to another follow two paths, the first is voluntarily and consciously as a result of the influence that each generation left on its members through education, and the other one is involuntarily and unconsciously through collective memory. These involuntary and unconscious influences inherent in the collective memory, which mainly results from the stability of the belief, are responsible for the continuity, and accumulation of experiences to give unification in visions and perceptions through the metaphysical content of these beliefs.

### 1-1 Literature review:

#### 1-1-1 Definition of Metaphysics:

Metaphysics is a branch of philosophy that studies the elementary principles of the world and the essence of the sciences. The interests of metaphysics are divided into the study of the nature of existence, the interpretation of the basic phenomena in nature, the levels of existence, the types of entities and the relationship between them. It also discussed the universe, how it was made, and its components. Baumgarten Alexander Gottlieb defined metaphysics in his book "Metaphysics" 1957 "It is the science that studies the first foundations or principles upon which human knowledge is based, and these foundations are ontological (the concept of existence), cosmological (the concept of the universe), psychological and theology (the concept of God)" (Ghaly 2003).

Aristotle divided metaphysics into three main branches in addition to some small parts related to the philosophical lexicon, and some of what was extracted from the natural sciences, which are now considered the traditional branches of metaphysics. These branches are ontology, natural theology, and cosmology. Metaphysics has given man his ideas and perceptions and has become a major element in defining and shaping the intellectual and philosophical vision to represent the (absolute) God, the universe and existence (Teichman and C. Evan, 1999). Man has relied on religions, myths and heritage constants in obtaining knowledge that explains the natural phenomena of the universe, as it gave him a conception of existence, God and his nature and an explanation of everything that is metaphysical, imperceptible and unseen. It also worked on the formation of the cultural and cognitive structure of man through the three branches of metaphysics (Franklin, 1987).

Metaphysics is concerned with the unseen and everything that is outside the framework of physical sense and observation, and it imposes itself on its adherents through a complete system of beliefs that is passed down through generations. Collective memory has been known to be the linking foundation of society, as it works to define all plastic structures as unconscious cultural systems that give significance and meaning to what is legendary, historical, or religious in the lives of peoples. It gives the rules organizing social and cultural relations in a certain way that is derived from what the collective memory stores from its deep past and from its unconscious historical structure of existence.

### **1-1-2 Metaphysics and semiology in architecture:**

From the foregoing, we find that metaphysical perceptions and visions depend on myths and religions that are transmitted to humans in the form of stories and legends told by multiple narratives and different languages that depend a lot in their presentation of ideas on language. All mental activities are based on language. We think through words and communicate through words. People are connected to the truth through the names they give to their perceptions and ideas (Broadbent. 1999).

Semiology has emerged as a result of many different studies in the field of language analysis and understanding, which focused on contemplation and deliberation in the process of transferring ideas and their meanings - signs - within society from one person's mind to another person's mind (Teichman and C. Evan, 1999), in what was known as the science of sign systems "semiology – semiotics".

Semiology is the deliberate transfer of ideas and their meanings from one person's brain to another's" (Kemmer). Semiology was not limited to the study of language only but also extended to include all aspects of different communication activities in life, such as customs, social traditions, architecture and poetry.

There are two main branches of semiology, one of which depends on the philosophy of interpretation, and the other depends on the translation of physical forms and symbols, and both are related to the other so that it is not possible to separate them when explaining something and its meaning.

#### **1-1-2-1 The sciences of interpretation (Hermeneutics):**

It is the philosophy of interpretation that is used to understand any text, and this philosophy stems from reading religious texts in the original, and the result of this philosophy is not

absolute, as it depends on the point of view of the critic or author and his intentions in simulating and interpreting the event (Broadbent. 1999).

### **1-1-2-2 The sciences of symbols and signs (Semiology):**

Semiology is a study of symbol and what it is? And how symbols and signs have meaning and how they are interpreted? The sign has also been chosen automatically; it is an agreement between people on the meaning by which the process of assimilation is completed. The interventions of researchers in the field of understanding and analyzing the science of sign systems varied, this paper will depend on the interpretations of Ferdinand de Saussure as a basis for intellectual presentation. Where the entrance to the interpretations of de Saussure is the first in this field, and all the credit of this science goes to de Saussure and his "Theory of Signs", and what is meant here by the sign (Broadbent. 1999).

The sign is anything that indicates something else and as a reminder of it. So, the sign could be a physical thing denoting something immaterial, and it may be a word (read or written), gesture, shape, drawing, an image... and it may be a building. The sign is something, anything, which "stands for" or reminds us of something else (Hoffmann). To achieve the research's goals, it will adopt Ferdinand de Saussure's method, as a basis for analyzing and criticizing the research case study.

## **2- Methodology:**

This paper will adapt Ferdinand de Saussure's model of differentiation which has two basic principles: (1) that linguistic evolution occurs through successive changes made to specific linguistic elements; and (2) that these changes each belong to a specific area, which they affect either wholly or partially. Ferdinand De Saussure called Semiology a Theory of Signs. What he meant with the word "Signs" is anything that refers to something indirectly or is a reminder of it. That could be through reading text, gesture, form, photo, or a building. "Sign is something, anything, which "Stands for" or reminds us of something else" (Hoffmann).

### **2-1 Ferdinand De Saussure and Semiology:**

Saussure addressed several points in his interpretation of semiology, which the research will adopt in his interpretation of the metaphysical content of religious texts, stories and heritage myths as an intellectual influence for the architectural stimulations of the case study, and these interpretations include the following:

#### **2-1-1 The difference between language and speech:**

##### **- Language:**

It is something that we all share, with the words and grammar to connect these words with each other, but the linguistic expression may differ from one individual to another so that we prefer to use specific words in the dialogue, and we link them to certain rules as well, which is known as the (personal) linguistic expression, which expresses Human personality, identity and culture.

##### **-Speech:**

It is the linguistic structure to link a group of words with each other - or it is the rules of syntax words together - and the discourse has different and varied ways, depending on what the individual depends on in linking the words of his dialogue. Saussure went further in explaining

that the interpretation of the meaning of the word becomes clearer according to its position in the linguistic context and with other words that are adjacent to it. For example, the word “architect” reminds us of the word architecture, building, construction, technology, local and environmental. This interpretation of Saussure is like the interpretation of Vitruvius in the past, where Vitruvius said: "In all matters, but Particularity architecture, there are these two points: the thing signified and that which gives it significance"(Broadbent. 1999).

### **2-1-2 Signifier & Signified:**

Saussure’s interpretation of this was that the two ends of the idea (the signifier and the signified) are linked and intertwined together to form the sign, which is the thing that indicates and mentions something else. What is meant by the signifier of Saussure is the material thing that conveys the idea (a drawing, a shape, an image, a building).

What is meant by the (signified) according to Saussure is the intangible thing that completes the idea. So, the signifier and the signified by Saussure are the two ends of the idea (material and moral). The relationship between them may be arbitrary, that is, without a specific origin (the arbitrary sign) (Glover 2013). Among the results that Saussure arranged on this arbitrary relationship is his strict distinction between what he called the descriptive study of the sign and the historical study of the sign (Culler, 2002).

### **2-2 The descriptive study of the sign “Synchronic Studies”:**

It is the study of the sign at a specific time and place (a specific simultaneous study). Synchronic linguistics is descriptive linguistics, such as the study of how parts of a language (morphs or morphemes) combine to form words and phrases and how proper syntax gives a meaning to the sentence.

#### **2-2-1 The historical study of the sign “Diachronic Studies”:**

It is the study of the sign and its development over time (a sequential study over time). Diachronic studies depend on a bunch of descriptive chronicle studies that compare old signs to new ones, meaning that the chronicle is changing with time (Russell, 1984).

The successive historical study relies on a series of descriptive simultaneous studies, that is, the succession is understood only through a comparison between the conditions of the previous sign systems and the conditions of the subsequent sign systems, that is, the succession is understood as a change in synchronicity (Culler, 2002).

## **3- Discussion:**

### **3-1 Criteria for choosing the case study:**

- The fact that the building is a subject of controversy over its form and expressive vocabulary and the motives for its formulation.
- The function of the building as a museum allowed the architect to carry many philosophical and expressive values that gave him a distinguished architectural feature that the paper seeks to discuss.
- The architect’s religion, which made it easier for him to immerse himself in the metaphysics of the Jewish religion, to get inspired from it.

-The presence of the building in Germany, the country of Nazism, which left a great impact on the hearts of the Jews, which Libeskind considered an opportunity to express and vent about his beliefs and identity.

### 3-1-1 The Jewish Museum, Berlin, Germany:

This project was an architectural competition aimed to create a new museum to be an extension of the ancient Jewish Museum in Berlin and symbolically reflects the painful events that took place in the Jewish community, where the museum presents the social, political and cultural history of Jews in Berlin from the 4th century to the present.

The architect wanted to express the Jewish heritage and the stories that tell the exit of Jews from Egypt and their fragmentation in the land to express the repeated tragedy of the Jews, referring to the latest of these tragedies and the persecution of them by the Nazis and to remind people of the Holocaust.

### 3-2 Metaphysics as a motivation for forming elements of the building:

#### -The story of the prophet Abraham's throwing in the fire:

Libeskind was influenced by the miraculous attitude of the Prophet Abraham, who remained alive after being thrown into the fire inside a closed vertical building, turning the burning fire into a cold that preserved his body (Majid Nabil, 2009). The architect inspired some features from this story and designed a tower at the end of the museum that mimics the Holocaust-Tower in its appearance. In order to demonstrate the revival of The Abraham Building that the architect wanted the visitors to enter in a safe vacuum despite the automatic closure of the tower door as soon as they walk inside and the absence of any windows except one hole in the ceiling and its placement of a high sea ladder that cannot be reached. Visitors to the tower feel afraid as a result of putting iron jets in its walls to suggest that the place is prone to ignition, this inspiration gives the visitors a feeling that they came out alive from the tower as the Prophet Abraham survived the fire applying his architectural concept "Rooms against forgetting" (Lenartowicz).

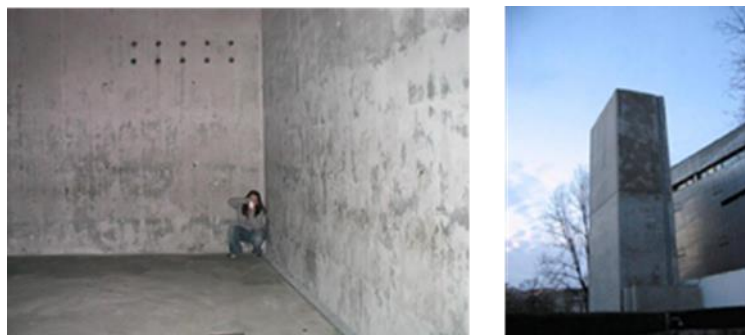


Fig 1. Holocaust tower in and out

[http://farm3.static.flickr.com/2015/2532145366\\_8382945a9e.jpg?v=0](http://farm3.static.flickr.com/2015/2532145366_8382945a9e.jpg?v=0)

#### -The story of the suffering of the Prophet Joseph:

Libeskind was influenced also by one of the stories in the Books of the Old Testament, which tells of what the Prophet Joseph was subjected to being thrown into the well and through his imprisonment in the cells of the king of Egypt, which ended with his assumption of power and fulfilling his dream of reuniting with his family (Majid Nabil, 2009).

Considering this influence, Libeskind reused this story in the museum's design, visitors enter the old Jewish Museum and in one of its corridors they are surprised by a strange opening topped with a very deviant angle leading to the spaces of the new museum where they land down a basement in a road called "Road to World Abyss".

The route is like the landing of the Prophet Joseph in the well, the museum's spaces are designed at lower underground levels to resemble prison cells (closed, dark, overlapping as mazes, undefined) to make visitors feel the suffering of the imprisoned Joseph. Thus, applying the concept of "Museum without Exit", after a series of dark blocked corridors the axis of motion ends with a path illuminated by a so-called rising staircase (Hope for Liberation) in an announcement of the end of the blocked corridors. Museum Tour as a metaphor for the end of Joseph's prison term and then his transition to power and meeting his family (Libeskind,1997). The philosophical purpose of this inspiration is the architect seeks to realize his dream of reuniting the broken **Jewish community**.

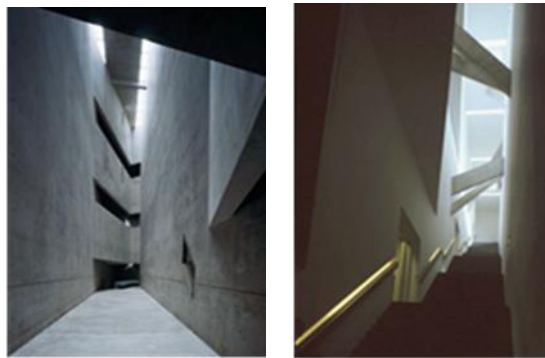


Fig 2- Museum's spaces narrated the story of prophet Joseph

<http://archide.files.wordpress.com/2008/11/dsf.jpg>

<http://www.zwoje-scrolls.com/zwoje40/text25p.htm>

### **-The story of the birth of the Prophet Moses and then his departure with his people from Egypt:**

Libeskind was influenced by the events of the religious stories of the Prophet Moses, who was placed hidden in a box by his mother as an infant and was dumped in the Nile for fear of Pharaoh, who ordered the killing of all male Jewish children. The box began to fall between the waves of the Nile in a slanted, sagging movement until it was picked up by the pharaoh's woman who named him Moses, who was pulled out of the water.

Libeskind was inspired by the Hebrew stories of the birth of the Prophet Moses in the design of the garden of exile. Where he tilted the garden yard and contained the visitors of the park inside a box that leads them away from their families and their homeland in a resemblance of the movement of Moses the infant in a box that takes him away from his family. The architect symbolized this metaphor with the concrete columns of the sticks scattered in the Nile, deliberately these columns are 10 m high so that the visitor feels dwarfed as a child in a simulation of the position of the Prophet Moses, a child inside the staggering box (Lenartowicz).



Fig 3- Libeskind tilt of the base floor and columns embodies a sense of turmoil and trembling in a simulation of the story of baby Moses in a box between the Waves of the Nile

<http://www.utdallas.edu/geosciences/remsens/Nile/intro.html>

### 3-3 Shapes and symbols as metaphysical motives for the formulation of the elements of the museum:

#### Zigzag and numbers (30,48,60): -

Libeskind was influenced by the way the Prophet Moses took on his journey with the crossline of Egypt on an irregular Zigzag Road between the following countries (Ramsis, Scott, Bidaa Itam, Magdoul, fam Elharuth, Baal Zevon, Yum Souf, Defreswar, Mara, Land of Chihoor, Eplem, Dufkah, Alash, Rafidim, Hazroth, Madian, Canaan Land or Jerusalem known as the Promised Land) (Majid Nabil, 2009).

In light of the influence of the sacred Zigzag form, Libeskind inspired this form to indicate the itinerary of the Movement of Jews with the Prophet Moses during the exit from Egypt, as mentioned in Hebrew stories, so that the general composition of the museum's blocks becomes a steep-angle zigzag line, likening the visitor's road in the museum between the spaces and passages of the Jewish exit route traveling between countries until reaching the promised land (Lenartowicz).



Fig.4- The general site shows the Zigzag formation of the Jewish Museum's blocks

Source: Satellite Snapshot through Google Earth

The distance between the Defreswar (crossing point) and the village of Mara (the first point set by Jews immediately after crossing) was estimated to be equivalent to 30 km and that the distance between it and the land of Shehour (the first city in Sinai land) is equivalent to 60 km,



these religious details are contained in the Biblical exodus and recited by the Jewish poet Walter-Benjamin Poem (One-Way-Street) (Lenartowicz).

In the light of these influences, the architect inspired the events of the religious story contained in biblical travel and Benjamin's poem to re-employ its events in the design of the museum, placing an open garden next to the museum blocks named (Garden of Exile) symbolizing the emigration of Jews to flee Nazism, Libeskind designed a square base of reinforced concrete in the center of the garden, placing 49 concrete columns in a matrix 7\*7 at the height of 10 perpendiculars at the base level, planting 12-degree olive bushes at the horizontal level to make their floor tilted and the vertical columns of slanted elements, which makes visitors lose the sense of balance, Libeskind explained why plants from Berlin soil were grown above 48 concrete columns and chose the middle column to plant olives from the soil of Jerusalem, thus using the Jewish holy number 48, which refers to the year of the founding of the State of Israel in 1948 (Skude, Flemming).



Fig. 5- The Exile Garden of the Jewish Museum has a slanted concrete base with 49 columns on it.

<http://www.guardian.co.uk/travel/2008/nov/08/guided-city-tours>

Libeskind also was inspired by the holy number 30 to represent in the design the number of slides and narrow longitudinal glass windows covering the entire facades of the museum, while the holy number 60 was used to be the number of detailed sectors of the spaces of the glaze blocks and to represent the number of steps that the visitor cuts between each block and the space adjacent to it as a representation for silent absence, and that the designer's use of all these religious details is an application of his architectural concept: Dynamic Dialogue between the Past and the Future.

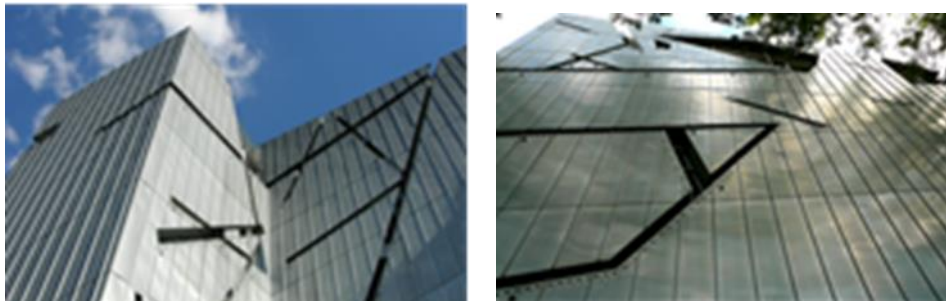
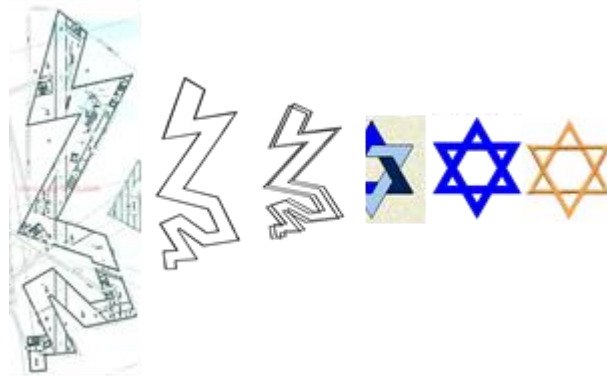


Fig. 6- Libeskind's design of 30 glass slides on the museum's facades symbolizes the biblical sacred figure Libeskind, Daniel, "Radix-Matrix", Prestel-Verlag, Munich & New York, 1997

#### **-Religious symbols (Hexagonal Star of David):**

Libeskind was influenced by the most important religious symbol of the Jewish community inherited from Hebrew civilization, the symbol of the Star of David with six heads, in the light

of this influence the architect stripped this religious symbol where he dismantled its ribs and emptied them of their centers of gravity, Libeskind proposes the centers of this star along the length of the one way taken from the poem of Walter Benjamin, and this feature was repeated in his works.



**Fig. 7- Libeskind's dismantling of the religious symbol “The Star of David” and emptying its triangles from its centers of gravity to embody the meanings of loss, absence and death**

<http://www.zag-arch.com/arch/images/stories/Projects/jewish-museum/plan.jpg>

Libeskind explained that the museum's design is an abstraction of the hexagonal star because this form resulted from a random mathematical matrix called radix-Matrix, the lines of this matrix were formed by connecting Libeskind to a network of lines from the old houses of Jewish celebrities who lived in Berlin before World War II, these celebrities chose the houses of:

Political activist and Jewish historian Rahel Varnhagen.

Jewish philosopher and theologian Frederick Schleiermacher.

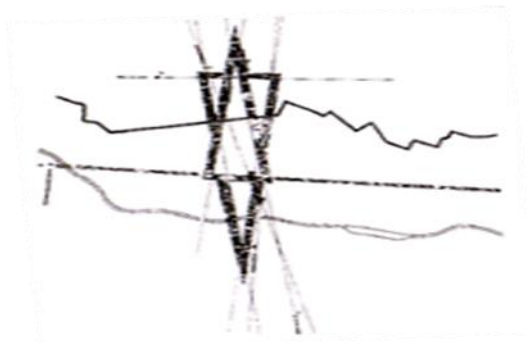
Jewish poet Paul Celan.

Jewish poet Walter Benjamin.

Jewish musician Arnold Schoenberg.

Jewish architect Miss van Der Rohe.

Their dwellings became points identified by Libeskind on the map of Berlin and then draw lines connecting them to form this matrix, which represents an abstraction of the Jewish religious symbol the Star of David (Skude, Flemming).



**Fig 8- The Random Libeskind Matrix formed the Jewish religious symbol the Star of David**

“Majid Nabil Ali Youssef, Ancient World Mythology and Its Impact on Contemporary Architectural Design”, Dar Elfikr Elaraby, Cairo, 2009.

#### 4- Conclusions:

- Metaphysics still has a major impact on influencing the formulation and formation of thought and architectural concepts, which many modernist thinkers and philosophers denied, and even claimed that metaphysics had gone irreversibly after the modernist conceptual vision dominated the universe as a result of the rapid and successive development of experimental and physical sciences in the twentieth century.
  - This influence was clearly reflected in the expressive and morphological features of the Building of the Jewish Museum in Berlin. Daniel Libeskind has succeeded in inspiring from Hebrew stories and turning them into spaces with distinctive architectural features.
  - An analysis of the compositional elements and expressive features of the building showed that architect Daniel Libeskind was deeply influenced by Jewish religious beliefs derived from Jewish religious stories, the Torah and the Talmud.
  - Daniel inspired the design axes of the museum building from the branches of Jewish metaphysics and its most prominent architectural features. He also stripped and dismantled the Star of David, the well-known Jewish symbol, emptying its centers of gravity, and used zigzag lines and linked them in signs symbolizing the sheen of death, loss and pain.
  - Libeskind used symbols and signs that suggest meanings and suggestions through which he was able to give the building architectural features different from the traditional architectural features where he was keen to load the physical elements of the building suggestions and signals that always draw attention to the meanings he wanted to express in his ideas.
  - Through its creative architectural capabilities, Libeskind has transformed Jewish religious texts into architectural spaces, 3D blocks and architectural details that reflect the metaphysical content of the Jewish religion.

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