

# **Structural Geology and Contemporary Art as introduction to Enrichment of Decorative Design**

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## **Introduction**

This research is based on the study of one of the latest contemporary artistic trends, Tectonic Art, it is derived from one of the fields of natural sciences rich in plastic and aesthetic values of textures and linear geotectonic elements, a branch of structural geology, and this research focuses on the study of tectonic art.

## **Search problem:**

Through studies in art and nature, this research tends to try experimentation in one of the contemporary artistic trends, tectonic art, which is the source of visual inspiration with many plastic influences, so the problem of the research can be identified as follows: How can decorative designs based on the vocabulary of tectonic art be developed as a trend in contemporary art?

## **Search objectives: The research aims to:**

- The development of decorative designs through tectonic art based on structural geology.
- Taking advantage of the vocabulary of tectonic art in the development of new formulations to enrich decorative designs.

## **The importance of the research is as follows:**

- Learn about the vocabulary of tectonic art and study the work of tectonic artists.
- Take advantage of the vocabulary of tectonic art through the work of tectonic artists in many artistic fields to enrich decorative designs.
- Add a new study of the decorative design field based on the art of tectonics.

## **Search assignments: The research assumes that:**

- Taking advantage of the plastic and aesthetic values of tectonic art in the development of decorative designs inspired by synthetic geology.
- Decorative designs based on the vocabulary of tectonic art can be developed.

## **Search terms:**

### **Structural Geology**

Synthetic geology is a branch of Earth science that is interested in studying secondary terrestrial compositions resulting from the exposure of the earth's crust rocks to the process of grilling due to tectonic and non-tectonic forces.

### **Tectonic Art**

It is an art associated with geotechnical science within one of the branches of structural geology, a science that is interested in studying deformations in the Earth's crust or in the Earth's rocky atmosphere and identifying the general tectonic state of the Earth by studying geological compositions.

**The meaning of tectonic**, a word derived from the Greek word Tektone and its meaning is mystical.

The concept is scientifically defined from the engineering side: that it is the unit of structural aspects with an architectural and aesthetic character so that structural and technical thought cannot be distinguished from creative and artistic talents.

The researcher has **already known the art of tectonics** as an art in which the artist deals with units of rock tectonic structures of all kinds such as the hexagonal forms of basalt columns or rock folds and cracks in their different forms and types, by photographing them either through direct or aerial vision (by satellite) or by photographing their impact on the tectonically active areas.

### **Decorative Design**

It is a work of art with two or three dimensions and may contain the fourth dimension (time) or fifth (movement) and it occupies space in the vacuum and is influenced by both the idea of work and the thought and vision of the artist and his various individualities, and uses all elements, processes and foundations of design in addition to different materials and techniques to achieve a goal or idea predetermined by the designer through the stages of the design process.

### **Research methodology:**

The research follows the analytical approach in the theoretical framework, which is subjected to study: 1. What is structural geology? 2. What is tectonic Art?

3. Tectonic art and decorative design 4- Tectonic design systems

5- The structural foundations of design and its achievement in the art of tectonics. 6- Study and analysis of models of the work of some tectonic artists.

### **Search axes:**

#### **1. What is structural geology:**

Synthetic geology is a branch of geoscience that is interested in studying many geological structures such as cracks and huge folds formed as a result of tectonic movements. Geotectonic, a branch of synthetic geology, is interested in studying how the constituent forces of geological compositions arise.

#### **2. What is Tectonic Art:**

This contemporary trend is associated with geotectonic, which is one of the branches of structural geology and can define tectonic art as "an art in which the artist deals with units of rock tectonic structures of all kinds such as hexagonal forms of basalt columns or rock folds and cracks in their various forms and types by photographing them either through direct vision or aerial vision (satellite) or photographing their impact on the active areas of Tectonic, A number of artists turned to this science, which drew their attention to its tectonic structures, in

which they saw a rich material of creativity with its formative and aesthetic values. The trends of this era in the arts, where the fields of this art have varied through computer arts and applied arts from sculpture, photography, printing and architecture as well as decorative supplements. Christine Braith, Jacek Yerka.

### 3. Tectonic art and decorative design:

In tectonic art, the artist and designer were inspired by a variety of compositional vocabulary from rock tectonic structures in their various forms.



Some tectonic structures from which tectonic art was inspired.

<https://forum.xcitefun.net/garni-gorge-a-fantasy-place-absolute-must-see-stuff-t11961.html>

### 4- Tectonic design systems:

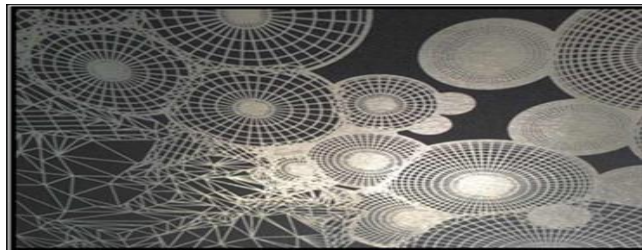
The researcher classifies systems in tectonic art works in terms of font type and also engineering construction to the following systems (engineering system, linear system, network system, Hewley system, body system, tectonic system, analogue system, repetitive system).

Tectonic Digital Art (Hewley System) is one of the artist's works Kokkugia

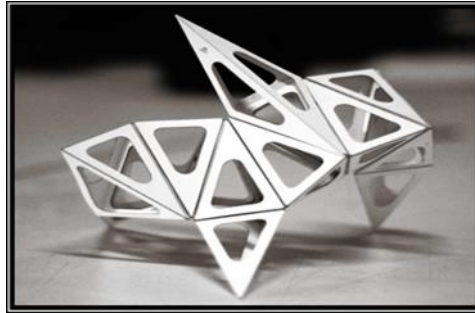


<http://c2.vgtstatic.com/thumbll/3/3/33773-v1/former-2002-serpentine-gallery-pavilion-after-relocation.jpg>

Wallpaper called tectonic fields illustrates the mesh system.



<http://studioprzedmiotu.pl/tectonic-fields-wallpaper-by-huxhux-design>



One of the models of designs from the final of the Tectonic Design Competition 2007 Illustrates the tectonic system <https://softtrigid.wordpress.com/tag/tectonic/page/>

#### ٥- The building foundations of design and its achievement in the art of tectonics:

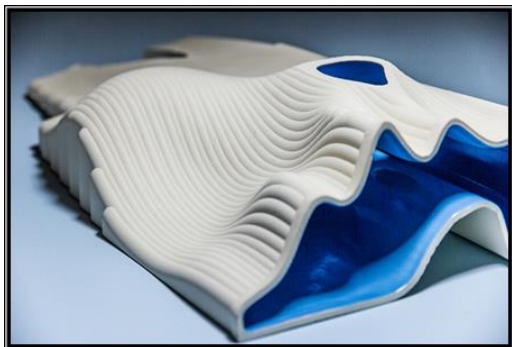
The structural foundations of design mean those foundations associated with formal construction in the sense of those main axes on which vocabulary and plastic elements are based in accordance with aesthetic systems, laws and values.



Ascending rhythm in one of the works of tectonic art based on the geometric concept of tectonics with Diversity of color grades in tectonic works.

#### 6- Study and analysis of models of the works of some tectonic artists:

The fields of this art have varied through digital design and applied arts from photography, sculpture, architecture and accessories by analyzing an anthology of tectonic works, the plastic and aesthetic values will be revealed as well as the vocabulary of tectonic art. From a collection of works of art related to tectonic art, which are represented by plastic and aesthetic values such as various linear and artistic systems. This analysis aims to draw plastic relationships, aesthetic values and plastic vocabulary in the works of tectonic art in its various fields and to benefit from it in enriching decorative design.



**Radical Craft**  
*Tectonic Horizons*  
Clay and polyester.

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<http://www.artandeducation.net/announcement/data-clay-symposium/>

**Structural foundation (general structure):**

The artwork is in the form of a vertical pyramid, and the structural basis of the shape depends on the prominent horizontal wave lines organized in the form and distributed in equal dimensions where these lines are followed in one direction and this sequence gives a sense of design to sometimes decline and rise at other times.

**Plastic relationships and aesthetic foundations:**

The work relied on the repetition of the prominent horizontal wave lines that gave cohesion and solidity to the parts of the work as the vacuum permeated some parts of the work at the top and bottom to confirm the sense of real embodiment in the artwork.



Warren Gray

digital tectonics

Digital design inspired by earth movements

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<http://uploads4.wikiart.org/images/josef-albers/graphic-tectonic-1941.jpg>

**Structural foundation (general structure):**

The design is square and relies on a range of different curved lines (horizontal and slanted), which are parallel in most parts of the design, where different fish lines and varying shades of color are confined.

**Plastic relationships and aesthetic foundations:**

The kinetic rhythm of the design is achieved by the movement of curved lines of their types (horizontal and slanted) in different directions, as well as by repeating the curved lines of diverse thickness and varying shades achieving depth and prominence.

**References****First: Arabic References:**

- 1) Zakaria Hammami: "Geology and Earth Sciences Tectonic Earth Geotechnic", Modern Book House, Cairo, 2008.
- 2) Mohammed Hafez al-Kholi and Mohammed Ahmed Salama: "Design between fine arts and decoration", 2007

**Second: magazines, periodicals and conferences:**

- 2) Ali Mohsen Al-Khafaji: "Tectonics in Architecture", Published Research, Iraqi Journal of Architecture, Volume 30, Issue (1-2015)

**Third: Dictionaries and dictionaries:**

- 4) Supplier Dictionary