

## Digital technology and its effect on the aesthetic values in contemporary relief sculpture

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### Abstract:

Since the outbreak of the technological revolution, and the scientific progress in the field of industry, and producing tools and modern apparatus that equipped the artist with the cognitive capacity and plastic capacities through recognizing his/her ores in expressing his paintings executed with the method of relief sculpture inside his artistic workshop, so that manual equipment and electrical instruments can't be dispensed, that increase the imaginative and creative artist capacities, which gave him creative visions making him interacts with the ore with modern methods and technologies, hence we conclude that technology is " a set of skills and experiences that are necessary for producing any artistic work, consequently it is a method for the Sculptor that helps him in performance, entering into deepness and secrets of each ore that he will deal with and how to overcome it, hence, technology is the core of the art work, and aesthetic values are the product of what was made and it is restricted also in performance methods in which the artist deals with in producing his work, and it isn't also natural values.

Digital technology appeared in modern relief sculpture works keeping pace with technological industrial progress that equipped the artist with plastic capacities and provided him an opportunity to break in ores world that they were difficult to enter in its deepness and deal with it, and thanks to modern digital technology where the sculptor can produce very charming and accurate works whether these works serve the aesthetical aspect as producing art works with relief or basic sculpture or combine them with accuracy and with any ore.

With the development of technology concept, there is a change in art methods, and as a result of this development, the plastic concepts were developed. Technology was functioned in modern sculpture works aesthetically, discovers new expressive contents and copes with this technological caravan that has an obvious effect in the technical methods for several artists.

### Key words:

digital technology – aesthetical values – technology – relief sculpture – CNC

### The researcher deals with the research to recognize:

- 1- What is the digital technology, its methods and performance methods?
- 2- To what extent does digital technology contribute in relief sculpture?
- 3- The effect of digital technology on economic and social aspects.
- 4- Positive and negative effects for using digital technology.
- 5- The effect of using digital technology on aesthetical values in relief sculpture.

Through presenting a set of relief sculpture works that were executed through digital technology with relief sculpture method to reach findings that can be used of in deeping the idea of digital technology to highlight aesthetical values of relief sculptures.

Then the researcher presents some findings and recommendations in which he achieved through the research subject.

**Research Problems:**

**The problem of the research is summarized and resided in:**

Does using digital technology affect stable aesthetical values and add other aesthetical values through finding plastic solutions depending on absolute accuracy and speed of work achievement?

**Research Hypotheses:**

1- The researcher hypothesizes that digital technology may change an ancient relief sculpture concept.

2-The researcher hypothesizes that digital technology develops relief sculpture form to contribute in mixing concepts and its labels and affects the economical factor in terms of providing time in an elapsed time of work ... the speed of it's execution and absolute accuracy.

**Research Aims: -**

**The research aims at:**

1- Finding new technology enriches formulations and forming relief sculpture.

2- Making use of modern technological data in finding plastic technologies and formulations giving values added to relief sculpture.

**Research Importance:**

1-Finding plastic technologies and formulations enriches aesthetical values in relief sculpture.

2- Overcoming solid ores that relief sculpture finds difficult to use it in his sculpture works.

3- Connecting the art product with the market through execution speed and the ability to clone with specifications correspond with the original production.

**Research Limits:**

**Firstly:** temporal limits: In the second half of the twentieth century till now.

**Secondly:** spatial limits: Egypt and some Arab and European countries.

**research premises:**

1- Using the machine and its ability to solve the problems of tempering solid ores such as metals, wood and stones with its types contributed in innovating plastic technologies and formulations helped on developing the concept of relief sculpture and giving an aesthetical value added to the stable aesthetical values.

2- Using modern machines and technology in relief sculpture has an effect on the economical factor.

**Research Methods:**

**The researcher follows the descriptive method.**

The researcher can ascertain the hypotheses developed for this research through the following points:

1- The concept of digital technology, its methods and performance methods.

2- To what extent can digital technology contribute in relief sculpture.

3- The effect of digital technology on economic and social aspects.

## **The conclusion:**

Under the scientific and technological development, this strong dominance of thinking innovations in the field of modern digital technology and forming with ores by which the sculptor finds difficulty to use, so the relief sculpture must question and search continuously for new formulations and technologies characterized with absolute accuracy and high technology that keep pace with this technological caravan that has an obvious effect on art methods for several artists who resort to the machine technology and its plastic potentials in expressing their thoughts and expressions, particularly in the field of sculpture aspects that depend on ores in which manual skill can't execute particularly in metals, stones and woods because of its difficulty in formulation. With the development the concept of technology, followed by a change in art methods. As a result of this development, the plastic concepts were developed, technology was functioned in modern sculpture works aesthetically, discovering new expressive contents. The technology connected with what was innovated of machines, equipment's technology and electronic programs that help in innovating new methods in formation.

## **Findings and recommendations:**

### **Findings:**

- 1-Relief sculptures are considered one of the aspects for research, determination and experimentation in order to reach modern methods and technologies enriching aesthetical values for relief sculpture.
- 2-Entering Relief sculpture field in modern technology by using digital technology allowed the artist expression freedom with all ores to make use of them in his art works.
- 3-Technological data through digital technologies provided for the artist the elapsed time in work that influenced the speed of work achievement with the least effort and time.
- 4-Exploiting modern technological data in relief sculpture through modern CNC machine influenced economical and social aspects.
- 5-Technology and digital technology in economical field provided eradication of labor problem controlling in production, and this has appeared more in wood sculpture at Damietta city since it was considered the first in producing wood sculpture, and Oymak profession was unpopular before CNC machines.
- 6-Digital technology allowed a change in employment form in terms of zooming with any size and any measurement; it also allowed the potential of modifying with deletion or addition .... Etc.
- 7-Modern technology allowed aesthetical values confirmation through innovating new ores and entering in relief sculpture method that were used in a narrow and limited range and weak plastic potentials in terms of its accuracy and the safety of its external lines.

### **Recommendations:**

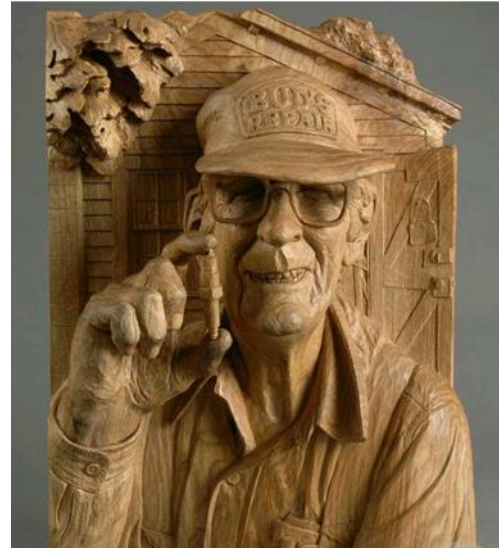
- 1- The researcher recommends the necessity of exploiting this huge technical development and this huge revolution of technology in the field of relief sculpture and getting out in streets and squares in producing huge wall works enriching the street and allowing the viewer to interact with these works.

- 2- The necessity of educating students and training them on modern technological machines and making use of technological data.
- 3- Establishing workshops for students to know the potentials of digital technology and how to exploit it.
- 4- Holding training courses at the end of the year at factories and companies that work in the sculpture field.
- 5- Modifying the courses bill and developing a course of digital technology practically and theoretically.

### Patterns of the research images







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