

Research summary

Experimenting in art is a creative activity in which the artist starts with set of ideas and plans to reach creative plastic visions in order to provide different and distinct solutions to present the artwork and to express his ideas. This happens through experimentation at the level of thought first (how to arrange elements and formulate them within the artwork), and then through the way in which he presents his work (surrealistic, abstract, expressive, etc.). During his experiments, the artist must use various artistic technologies in a way that serves his work.

These technologies vary according to the fields of the art especially the art of engraving and printing which is rich with those kinds of technologies in a way that makes it easy to the engraving artist to invent and create either by using these technologies separately or by mixing more than one.

technology in the same artwork . Also the artist can use different materials that have different feelings. The artist should take into consideration the plastic and expressive possibilities of the material to put it in the right place. Also he has to try using the color in many ways either by spreading it on big areas or by making overlapping colored spots or overlapping color lines in order to reach a masterful artwork which expresses how the artist sees what is around him in his own way.

The real artist in his constant quest to develop himself and develop his methods of expression starts to reject the idea of blind imitation of nature, and to seek new ways of creating shapes and formulating them within the vacuum, and to use many kinds of materials, colors and technologies through constant experimentation. Moreover, the social, economical and political development of the societies plays a major role in pushing the artist to use the experimentation in the art to reach his expressive goals , especially when the spirit of the era imposes new ideas and ways to be applied. All of that has contributed to the emergence of modernity in the plastic art. Many schools and artistic trends have emerged. Experimentation becomes an important basis for the construction of artistic work.

This has been reflected on arts in all its specialties, especially in Graphic because of its richness in technologies on one hand, and the importance of spontaneous work in it on the other hand.

It has been necessary for the American engraving artist to sail in the sea of experimentation, especially that the art of engraving and printing in America has been dominated by realism since its inception in this country. During the eighteenth and nineteenth centuries and the early twentieth century, the technical experiences have been limited to some works for American artists who were familiar with this kind of art as Joseph Benetton (1889-1975), Grant Wood (1892-1942), Martin Louis, and others. Their printed works embodied the American reality, scenes of everyday life and landscapes. Moreover, that period did not have workshops specialized in engraving and printing, but there were some painting schools in New York in the early 20th century such as “Ashcan” School, which produced some of Graphic works for some artists such as John Sloan (1871-1951).

Also, there was (WPA) project which was supported by the American government, and which also contributed in supporting the art of engraving and printing at that time. American artists met with experimental artists such as Stuart Davis (1892-1964) and Hans Hoffman (1880-1966), and saw the modern abstract methods, and that stimulated their minds to search for a new style through experimentation in order to reach works that satisfy the artist himself first, and then carry him to new horizons that comply with the development of the community, and carry the local American

fingerprint at the same time. All of that pushed them to use experimentation in the abstraction of shapes.

In 1913, the first large exhibition of modern European art (the Arms Show) was held. It had a major impact on changing the style of American art that began to be influenced by the modern European schools and its new experimental methods. Moreover, the immigration of the European artists during the Second World War in 1939 had an important effect on the development of the art of engraving in America. The (17 workshop) which was founded in New York in 1940 played a very important role in the development of the American engraving art, especially as it brought together the European artists with the American ones, who were attracted to the style of the artist Stanly Hayter (1901-1988) which based on free experimentation and on using the Graphic as a way that adds expressive values to the shape and content. The American artists have founded that the Graphic as an art can exceed the art of photography and sculpture art.

The birth of the abstract school in America was a result of this European-American interaction. Through the abstract school, the American artists sought to find mental images that explore their psychological depths. When the artists suffered from all the destructive circumstances of the war, they found in the artistic experiments in their various forms, including the art of Graphic, good ways to express that cruel human tragedies. At that stage, the intellectual maturity placed them on the boundaries of abstract expressionism, and through it, they presented works that reflected their psychological situations. In their works, they followed the ways of (spontaneity, automatism, improvisation), and their art was based on two basic trends:

Emphasis on a dynamic gesture full of vitality in parallel with meditation and study of the color areas. In both cases, the mental images were abstract, and their expressions differed in line, shape, color, and texture. Some of them resorted to free color spots and automatic lines because they found a way to express through them without existence of a focus that took the attention of the viewer. For example the artist Jackson Pollock (Jackson Pollock 1912-1956), whose experience was a new trend in abstraction, since he relied on the circle as an abstract idea but not as a geometric idea, and he adopted the straight line in its surreal shape that tends to be curved and wrapped. As a result, his photographed and printed works depended on shapes which appeared to be specific, but he made them carry innovative features either through his way of pouring the colors over the huge plates in different directions, or through pouring the biscuit ink on the stone by brushes and fabrics. Also he used the method of spraying Arabic gum to preserve some white areas during printing. In his art he emphasized the spontaneous movement, and the intensity of emotion by using colors. He called for taking the advantage of the coincidence to express concrete sensations, as the subconscious provides justification for the results, which are subsequently directed in the appropriate manner.

The artist William De Konning (1904-1997) was known as an abstract expressive artist who developed his work in an emotional and symbolic way, and hinted to very strong symbolic shapes. Also, he presented a new concept to abstract the shapes in order to develop them in a way that expresses the drama of anger, pain and love, all of that made the shapes transfer to be a passion or an idea in his works.

Barnett Newman (1905-1970) and Mark Rothko (1903-1970) developed a method of abstraction based on large areas and fields filled with color. Perhaps, they did that to liberate the soul from the old-fashioned foundations and legends. They took advantage of various engraving technologies, such as lithography and silkscreen

printing which they used in their works to expand their field of vision in order to emphasize the importance of color in expression.

Also, Franz Kline (1910-1962) was abstract expressive artist who abstracted through dynamic, imaginative structures based on a rural background where his roots belong. Likewise, David Smeth (1906-1965), Lee Krassner (1908-1984), Joan Metchel (1925-1992), Robert Motherwel (1915-1991), Perel Fine (1908-1988). had their own experimental methods in shaping their printed works by choosing the appropriate Graphic technologies.

(Hayter) Experimental techniques also presented significant advances to the Graphic art by emphasizing the role of raw material in the enrichment of the printed work. The experiments which were performed by many artists in (17 workshop) were good examples for these advances.(Hayter), who was one of(17 workshop's artists), used soft ground etching technology to find various compositions and touches and to show the contrast between the shape and the line through that complex interaction between the shapes made of different materials and the lines engraved beneath them.

One of the artist who worked mainly on the raw material is Sue Fuller (1914). She combined the lines of the chisel and the different kinds of materials to get different levels in the space of the painting. Also, she reversed the process of printing by inking the surface of the metal sheet without inking the engraved areas. Consequently, the materials appeared in white color and they gave a beautiful and distinct result that differs from the hollow printing for the same work.

The (17 workshop) in New York was closed in 1955, but its experimental spirit continued in many workshops which came later, such as the (ULAE Workshop) ,) which was founded in 1957. It sought to publish books about artists and their works. Also, the (Tamarand Workshop) for lithography was established in 1960, and it characterized by the creative relationship between the artist and the worker who learned to adapt his skills to suit different artistic sensitivities.

Although the abstract expressionism was the prominent artistic movement in America from the early 1940s to the late 1950s, yet, a group of American artists wanted to reconstruct the relationship between art and ordinary objects which had been established by Dada. They sought to employ the technical composition in commercial products or artistic symbols (usually understood by the public) while producing Graphic works. Because of that they had been called to pop artists.

They distinguished themselves by their experimental horizons, and their ability to tune among the different specialties of the plastic art. All of that led them to create the Assembly Age Art, which is based on the idea of removing the borders between different fields of art, and on the concepts of research, experimentation and innovation in the artistic work. Pop artists also derived a lot from the technology of photography , silk screen printing and collage. Consequently the door was opened for several experimental processes.

One of the most important pop art artists who adopted the art of assembly was Jasper Jones (1930). He worked on the details of daily life, cinematographic images, and neglected objects such as broken lamps and empty soft drinks cans. He made the country's flag a visual subject seen as a work of art by using silkscreen printing technology. Jones was fond of experimentation and he moved from drawing to collage to lithography and silkscreen printing, and then to painting and sculpture. In most of his works he sought to combine these technologies to create something special. Sometimes he was mixing a sculpted part with a printed image, or mingled painting and Graphic, as in his unclassified work where he combined collage, strong water and acrylic colors.

Also, the artist Andy Warhol (1928-1987) supported the untraditional experimental arts by establishing his workshop (The Factory). He used the silk screen printing technology to print many of his works based on photographs of celebrities as Marlin Monroe and Elizabeth Taylor.

He presented them in a simple manner that allows the viewer to rethink about their symbols and meanings. He freed them from repetition and boredom by rephrasing them in unconventional patterns. He reprinted some works of well-known artists, such as the "Cry after Monch", in a new way by using silk screen printing technology.

The artist Robert Rauschenberg (1925-2008) sought in his works to integrate art into life. He established a movement called (Art Experiment and Technology), to combine the abilities of the engineer, the artist, and the architect. He was interested in collecting materials and sticking them to his photographed and printed works.

Many artists were so creative in this field such as Tom Wiselmann, Roy Leytenstein, Fernandez Arman, and Jim Dean.

In the midst of these waves of experimentation and multiple presentations in the field of visual arts, It was normal to take the advantage of the modern technology to be used in the service of art. As a result, the digital printing appeared at that period and opened new horizons of experimentation by using the new digital media with its ability to express in different ways. Many pop artists did digital works such as Warhol's (Portrait).

Also, some artists tried to combine the traditional technologies in engraving with the modern technologies by using computers to produce strong water prints, silk screen, and watercolor...etc. They used different methods to process them by using computer and materials such as (Toner), they processed the image by the computer in the shape of holes and channels that gave the effect of engraving by water or strong water. After that, each color was printed separately on a sheet of (Toner).

Then, the plates were prepared and stuck to the sheets which were faced down and they were heated until the ink melted and stuck to the sheet forming an acid-resistant mask. Thereafter, the plates were processed in acidic tubs and printed in the traditional way. This was so obvious in the works of the artist Rodica Simon. Some American artists turned to what is called "photorealism".

They used the cameras to get overly realism. They also used the silk screen to repeat the details of life in huge spaces, then they added some patches to them by spraying. Some of the artists of the photorealism were Shuck Close, Don Edy and Andy Rider. They used the camera, but their photographic work did not reflect the world exactly as it was. They were using the cameras with convex lenses which caused a slight distortion in the shape of the face and instead of correcting this distortion Claus was recording it as it is exactly in his drawings.

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In the early 1960s, Optical Illusion art appeared and it was based on the overlapped geometric shapes. It also used contrasting colors and gradual depths to create visual illusion that made the viewer thought that the shapes were

moving. Optical Art artists used silk screen printing technology and they used the computer to repeat their shapes and incorporate them into the painting. In some works, they relied on works printed in the traditional engraving methods to renew them and present them with new visions to the viewer.

In a nutshell, the successive scientific achievements have had a direct impact on the Graphic art, and the emergence of many laws and theories has led to the creation of new patterns in the contemporary artistic experiments.

The art of digital graphic has introduced a new experimental vision to the art especially in America. This vision does not conflict with the importance of the traditional engraving art, which will remain a very big field for experimentation and development as long as the spirit of creativity is still alive in the artist.