

The Impact of Using Lenticular Printing On the Art Print

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Abstract

Artistic printing is in continuous development, and the artist always strives towards innovation in everything that is new and different. Therefore, the researcher went to experiment with lenticular printing to see its effect on the manual art print, as the world is now searching in the fields of technology and everything that is new, but also hand printing has a distinctive character, so the researcher sees The method of merging technology with hand printing can give a new and different style, and it can also be achieved without the use of digital tools. It can also be implemented in a simple way to give richness to the artwork.

The history of lenticular printing has been studied and used in different ways, manual or digital, and each has methods and characteristics that give the artwork a different richness.by (the researcher)

Keywords: Lenticular printing - intaglio printing - optical illusions - Ebru - digital printing

1.Introduction:

Lenticular printing is considered one of the ancient arts, but it is in continuous development because it gives the artwork a special character that can lead to a richness of the artistic print. by (the researcher) Three-dimensional lenticular printing can be done and viewed naturally and directly without aids such as three-dimensional glasses, and the recipient is given a hint of depth or a change in the image, through programs dedicated to lenticular printing, but it can also be achieved without programs, and that happened in 1692 AD at the hands of the French Painter G.A Bois-Clair, who It relied on the angle of view using triangular slices. This technology developed in 1902 AD and was called Parallax Barrier. This method was used for a commercial purpose. It became called lenticular printing papers. It was used in a series of images instead of just two images, and it was inserted with solids, by creating a three-dimensional image using large angles, which it made it better for the recipient to see more than one image together, as it was used in photographs.

The principle of lenticular imaging depends on the uniqueness of the three-dimensional lenticular image in its ability to present a different image at the angle of view. This image is members of the lenticular sequence that corresponds to the viewing angles of the recipient, so it creates an illusion through the lenticular paper, which is a precise set of spherical lenses and a file dedicated to those blades. It is able to know the code assigned to it and present the projection corresponding to each angle. The display of each eye of the recipient sees an image from a slightly different angle, which makes the recipient feel three-dimensional because of the projections that the artist has placed for the recipient.by (Yitzhak Weissman- 2015 -p507-508)

1.1. Structure

1.2. Definition of lenticular printing:

Lenticular printing is a type of technology that simulates a three-dimensional movement without wearing specialized glasses for that. It has mechanical accuracy and a fixed angle with changing the image used. It is the use of two different images on top of each other with the use of a program dedicated to the technology. It consists of simulations and triple lenticular arrays. Dimensions When printing them, paper is placed, which is considered paper made of plastic with longitudinal lines, so each image is separated according to the lines designated for it, and when moving, the different image appears. by (James Tompkin, Simon Heinzle, Jan Kautz, and Wojciech Matusik content –2013-p1-2)

1.3. The history of lenticular printing:

It was discovered in 1692 by the French artist Bois-Clair by chance when he was walking next to his works and saw that his paintings changed from one image to another, and after that the barrier technique was invented when using photography by photographers Berthier and Jacobson in 1896, but its application is considered for the first time by the artist Frederick E. Ives, an artist from the United States of America, in 1906 AD, by using a system called the Parallax Stereogram, which is a three-dimensional aid. by (David E. Roberts -p2)

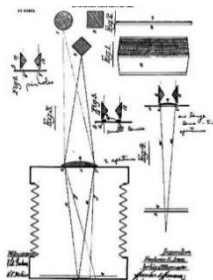


Fig.1. showing the Parallax Stereogram invented by the artist

Frederick E. Ives and obtained a patent in 1903 AD

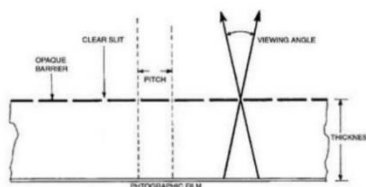


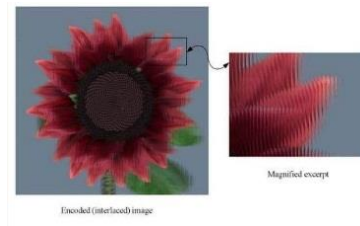
Fig.2. shows the barrier screen, which consists of vertical and separated lines, through clear slots in

the shape, in order to give the image a division into lines like mosaics and minutes.

It is clear from the figure the optical deception process that occurs to the eye by alternating between the vertical lines side by side so that the viewer's eye sees mosaic lines. Optical deception, its illusion is three-dimensional, as shown in Figure No. (3).



**Fig.3. shows the optical illusion process that occurs to the recipient
By (David E. Roberts -p4)**



**Fig.4 shows the image after placing the lenticular printing paper
(Yitzhak Weissman- 2015–p507-508)**

2.Materials and Methods:

2.1. Research problem

Difficulty finding digital lenticular printing paper, so it was imported from abroad

2.2. Research Aims

- 1) Enrich the manual art edition differently
- 2) A new plastic vision in the field of artistic printing

2.3. research importance

- 1) To benefit artists who are interested in the field of art printing

2.4. Research Methodology

Experimental - historical

3.Results and Discussion:

3.1. Practical experience

Lenticular printing can be done manually without the use of digital software by inserting two images together.

Achieved through the following steps:

- 1) Printing a work of art using manual printing methods, and the work here is engraved

2) Two different images can be used, provided they are of the same size, but here the work was done using the same artwork, but printed in two different colors, black and brown.

3) The two pieces are cut together into strips of 5 cm each

4) They are glued to a paper or a wooden board like an accordion

5) A strip of the black image is pasted, followed by a brown tape, until the work of art is finished, and in the end it becomes an overlapping work to suggest the optical illusion process, where only the brown painting is visible from the right side, and only the black work from the left side, as shown in the figure.



Fig.5. The artwork in its original form



Fig.6. The artwork during the implementation stages. The figure shows that the workers were divided into strips, and a brown stripe and a black stripe are placed



Fig.7. shows the artwork from the right side so that the recipient can see the artwork in

brown



Fig.8. shows the artwork from the left side so that the recipient can see the artwork in

black

3.2. The second experiment:

The second experiment is a combination of digital and manual, as the panels executed with mono and brow printing technology were converted to digital printing and the idea of lenticular printing was implemented manually.

Implementation Methods:

- 1) Two panels are printed on semi-glossy color printing paper, exactly the same size
- 2) The two sheets were pasted on an A4 size photofoam board, the same size as the two printed sheets
- 3) Divide the two boards into three santi and cut them into boards

- 4) Paste each plate of the picture and paste next to it the other plate of the picture in a shape resembling an accordion
- 5) Placing a photohole tape from below and above the board to increase the adhesion of the boards to each other



Fig.9. Image artwork for first panel



Fig.10. Picture of the second board after dividing it into three stiles for each cutting board



Fig.11. shows the image of the work from the front, as it contains the two panels together, and in order for the recipient to see the image of the artwork, he must go to the corner to see only one image separately.



Fig.12. shows the final work image from the right angle



Fig.13. A picture of the work in its final form and seen from the left angle

3.3. Third experiment

Digital lenticular printing can be done using the Photoshop program, and its idea is based on the same idea of manual lenticular printing, which is that the size of the two plates or the two images used is the same, and each plate is divided into sizes of lenticular printing paper, which is a standard size, and the lenticular printing paper is a transparent plastic paper divided into parts equal.

The image is divided into unified areas and a panel of the image is placed next to the panel of the other image until the work is completed and printed, and in order for the recipient to see it, he must put the lenticular printing paper on it and then stick them together

Implementation Methods:

- 1) Use Photoshop
- 2) Two different photos of the same size

- 3) Each image is divided into parts, provided that the size of the board is the same as the size of the lines of the lenticular paper
- 4) Place each panel of the picture next to the other panel of the second picture
- 5) Print the artwork
- 6) Paste the lenticular printing paper over it



Fig.14. lenticular paper

4. Conclusion and Recommendation:

4.1. Conclusion

- 1) Lenticular printing can be made simply by hand without using digital tools, as shown in practical experience
- 2) A lenticular print can be made using the Photoshop program, inserting two images together and pasting over them transparent lenticular printing paper so that you can see each image separately according to the angle of the recipient
- 3) The angle of the image and the way of displaying the artwork can be confirmed on the idea of lenticular printing
- 4) A new plastic vision in the field of artistic printing

4.2. Recommendations

- 1) Making a lenticular print using three or more images
- 2) Enriching the artistic edition with the fields of technology, as the world is now moving towards technology and it is expected that some manual works of art will disappear and the trend towards technology
- 3) Adhering to the manual art print and working to enrich it so that it does not disappear
- 4) Linking the technical edition with new areas and developing it
- 5) Searching for alternatives and new techniques to enrich the value of artwork

References:

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