

Pareidolia reflection in graphic design

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Abstract

The presented research sheds light on the topic of pareidolia and the reflection of its intellectual vision on the formation of new formal patterns that the designer can employ in graphic design. It is considered an art that enters various fields of life and is directly related to its accelerating reality. It is an art that reflects different fields that affect and are affected by the recipient. The pareidolia phenomenon has a role in crystallizing visual perceptual skills in seeing new formal patterns derived from activating this perception, stimulating the imagination with its mental images. The transforming the illusion achieved from visual images, which may be confused and irregular, into new perceptible forms that achieve visual communication with the recipient. This reflects the goal of Completed graphic design idea. This is what the research seeks to achieve its goal represented in revealing the phenomenon of (pareidolia) and its reflection on graphic design, which came out with a set of results. Most notably that in the variations of graphic designs, the designer employs formal patterns that are not clear and vague to the recipient. That understanding for these patterns is interpreted through The phenomenon of (pareidolia). It helps in determining the effects of these formal designs on the various levels of awareness and perception, which contributes to showing how to interact with the new visual form, and to what extent the change in its form does not affect the meaning and content of the graphic design and the understanding of the content of its design idea.

Keywords: Pareidolia, graphic design.

Introduction

The prevailing idea in visualizing vague shapes and images and what they are is done when perceiving them directly and with full

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awareness. However, this matter does not deviate from being a kind of illusion and visual imagination, as a result of a mysterious stimulus in which these forms and images appear to be unreal. This is what is known as the phenomenon (pareidolia), the subject of this study. We find a research reading of this recruitment in the study tagged (PAREIDOLIA: Anthropomorphic Characterization of the Face and its Implications for Product Design), by the authors: (Andrew Woodhouse, Ross Briscoe, Ed Broussard, Alex H.B. Duffy). Its goal is to (understand the role and impact of this phenomenon in the context of industrial design), which set out to explore the phenomenon of pareidolia - the tendency to see faces in the environment, buildings and objects that surround us - with a focus on the implications for designers when considering engineering, design and product composition (Andrew Woodhouse, 2018.), as the human mind visualizes a kind of interaction that arises between shapes, lines, and shadows, transforming fantasies and fantasies into a formal reality in which the basis is based on an imagined reality. The transforming of those mental fantasies and illusions into visual forms that the graphic designer can employ. In his graphic designs and convincing the recipient of the new form achieved, it gives (pareidolia) An explanation of many illusions based on sensory perception that can be employed to reveal artistic perceptions and ideas. This is what was dealt with in the research study (The effects of face images and the face of PAREIDOLIA on consumers' response to print advertising) by the authors (Gianluigi Guido, Marco Pecheri, Giovanni Pino, Rajan Netarajan) , which is based on the question (whether print ads that display faces (i.e. "face ads") or face-like images (i.e. "Pareidolia ads") are more able to attract consumer attention than ads that do not include such elements). The results provide recommendations for future research. Most notably (that in a limited number of comparisons, face and pareidolian ads did not work as assumed, which is probably due to the fact that faces and face-like elements were, in some cases, not clearly identifiable) (Gianluigi Guido) Therefore, it can be said that the phenomenon of (pareidolia) is a basis upon which it is based in many fields of art. Its reflection in the various variations of graphic design and with a work that represents a semantic intellectual structure that can call for different conceptual readings by establishing a link between the designed forms and the reality of the design idea according to the reflection of the concept of (pareidolia) on the graphic design achieved.

According to the aforementioned, we discover that (pareidolia) and its intellectual reflections are important for the graphic designer and the recipient alike. When the visual stimuli lead to stimulating the designer's imagination and intellectual artistic talents, based on what he possesses of mental image storage, and transforming all of that into

design images with new formal dimensions that he employs in his work. My design is intended to stimulate the recipient of its vague visual forms to interpret them in a way that achieves the goal of the design message in understanding the idea. This leads to the following question: - What is (pareidolia), and what is its reflection in the formation of the new design form, which achieves the meaning of the design idea?

It can be said that the aim of this study is: - To identify the phenomenon of (pareidolia) and its reflection on graphic design.

The research is spatially defined by a group of graphic designs. The design of which is based on visual elements that represent a formal and pictorial translation of the phenomenon (pareidolia) mainly within the framework of presenting the design idea. The designs were analyzed according to the descriptive approach for the purpose of the analysis.

1-The concept of pareidolia as a phenomenon.

Pareidolia is a form of impairment (or pattern) in the human tendency to perceive meaningful patterns within random data rooted in the brain's ability to sift through a mass of sensory information received to detect significant signals. (Robert G. Bednarik, 2016) , and it can be said that it is "a psychological phenomenon that causes the mind to interpret some irregular shapes and bring them closer to known forms. It is a behavior of the subconscious mind in a semi-involuntary pattern and often closer to automatic" (- <http://www.alriyadh.com/1542283>, n.d.), to understand the phenomenon more fully, it is possible to identify the intellectual roots of the term (pareidolia). So, we find that it (derived from the Greek word (para next to, instead of, along) and (eidolon image, form) (Hodgetts, 2017),It is a psychological phenomenon in which ambiguity, or a glimpse of what is not organized in the body, leads to an unrealistic perception that coincides with the real model (Stephan K. Chalup, 2010) ,Humans, animal images, or body shapes seen in natural settings such as clouds, rock formations, trees, or consumer and man-made products.

So the phenomenon occurs "when we realize the 'meaning' in a material source of randomness, as a result of the tendency of the human visual system to extract patterns from it" (LEE, 2016), and the visual system results mainly from the apparent unity of sensory perception, which is in fact the result of a large merger of the amount of information Stored mentality that can be accessed in different areas of the brain. It provides information about visual shapes, enabling the recipient to evaluate their essence in size, color and texture (Coello, 2005).We find its reflection clear in its employment in graphic design, so the face can be seen within pareidolia as "a form of 'visual false

alarm' in face detection, by confusing objects other than faces or meaningless patterns as faces" (Liu-Fang Zhou, 2020), as in figure (1), which represents a group of commercials within the campaign of (Jung von Matt) agency for the product (Max Shoes). The designer quoted, according to a visual graphic vision, the intellectual aspects of the phenomenon of breidolia in a visual form that was given to the recipient, An actual simulated image identical to the features of a human face, so cognitive processes are based on determining (how to interpret visual stimuli, specifically vague visual images that seem unexplainable, which are manifested in this phenomenon). (Hodgetts, Pareidolia A Visual Inquiry into the Perception of Ambiguous Images, 2017), With its features (characterized by strangeness and ambiguity because it expresses a world that is itself strange, mysterious and transforming. Therefore, it cannot be confined within common standards and generally recognized standards, or restricted by the rules of logic) (Amin Saleh, 2010). The recipient is in front of a pattern of shapes or images that may refer to reality directly or indirectly. They are unique in self-sufficient patterns, expressing themselves through their self-structure based on shapes, colors, lines and measurements.

2-Illusion and shape perception according to Pareidolia.

The shape, according to Pareidolia, is characterized by ambiguity, and it needs to search for help that enables it to realize the intricacies of its formal and vague formation, such as (the excessive tendency to perceive faces that may result from an evolutionary need to quickly distinguish faces in relation to the face-like object. Thus activating cognitive processes that alert the observant recipient to the identity and condition of the object Emotional "hostility, aggression, frustration ... etc." at the same time)) (Mustafa, 2017), as in figure (2), to realize the meaning and symbols that the figure carries, which carry a certain significance.

It can be said that (pareidolia) is "a kind of delusion or inability to perceive that involves a vague or vague stimulus in which things appear (not as they really are) clearly (- <http://blogs.psychcentral.com/.../what-does-pareidolia-mean>, n.d.)", as (it is represented in Seeing faces as fuzzy objects or patterns As a common form of)apophenia((2), the human tendency to perceive meaningful patterns from random data (Liu-Fang Zhou, 2020), to detect) significant visual cues, is driven by the effect of The intellectual derivations of the brain and the senses, to interpret the stimuli according to an expected formal model((- Robert G & Bednarik,, 2017). the form lies in "the center of the natural thing itself. It has a nature that can be precisely defined and confined. It is only a special way of The modes of existence of material to help limiting and control the world" (Mustafa, 2017) .As we can see in Figure (3), which

represents the design of a movie poster, the designer derived his basic formal element from his formal, manufactured form that is abundant in the usual living environment, Figure (4), except that, according to the reflection of (pareidolia), it carries features that are suitable to match the features of a human face after Additions of simple elements that stimulate the memory of the recipient to achieve that conformity, employed by the designer for semantic purposes and considerations that reflect the idea of the film.

3- Imagination according to Pareidolia in forming the design idea.

Imagination is an essential element in the realization of (pareidolia). Including very complex cognitive processes, as "necessary for the realization of the mind because of its degenerative, imaginative and synthetic properties" , (Wurm, 2015) as (it constitutes what the visual imagination possesses with its capabilities. Incomprehensible creativity is another form of reality, as it can be clearly remembered and embodied in many forms.), (Hodgetts, Pareidolia A Visual Inquiry into the Perception of Ambiguous Images, 2017) as in Figure (5), which represents a movie poster for the movie (CABIN FEVER). To induce the recipient to interpret the image without its apparent formal character through the implementation of thought and imagination. The imagination is present to combine a group of visual images into a synthetic structure with a single pattern and a specific idea that reflects to the recipient a stereotyped image represented by a figure (a human skull) as in Figure (6). In order to serve the idea of the movie, this image "becomes a new means of metaphysical knowledge. The image creates visual impressions Through it, the recipient can see what he does not see (Amin Saleh, 2010)". Through the use of imagination, images are borrowed to (prove something else in order to make their meaning clearer than the original image, by achieving a visual language in a form of forms related to the above. The new visual forms can express the different meanings of the elements related to each other in forms, images and texts. different, (Liping & Xing) and the metaphor "as it invokes formal imagination, it supports distant memory, develops mental production, and stimulates integrative understanding" . (Mustafa, 2017) Design ideas are given a new visual form, and these abstract ideas are represented (by tangible objects closely related to displacement, because one of the reasons for choosing an "idea" is to take upon itself a transition from a formal imagination to a more important formal element. Even if it is an unusual or more unusual shape. As long as this form makes the embodiment possible in the extent that the idea allows for the visual representation of that element) (Ibrahim , 1986). It can be said that (pareidolia) is a reflection of existence that cannot be stopped without mental effort and imaginative thinking in a group of forms. It arose from images and other forms derived from nature.

4-Mental images according to Pareidolia and visual formal output.

Pareidolia is an integral part of the operation of the visual system, due to the need to identify visual stimuli much faster than usual. It requires discrimination and processing, matching visual impressions with information stored in the brain, i.e. data derived from past experiences that form the so-called "internal model", after which a simulation is presented within the reflection of the shape in the visual (pareidolia), (Robert, 2016) in (meaningful patterns derived from random stimuli, and inherent in the visual system, derived from its effectiveness in selection). (Robert, 2016) We see this in Figure (7) for the design of the movie poster (THE DARK KNIGHT), whose visual design appearance represents a group of shapes. The recipient of which carries in his visual memory a basis upon which to activate the phenomenon (pareidolia), in order to understand the final visual structure of the poster. The red color value, figure (8) (the symbol of the main character in the film) represents a visual reflection of the bat bird in a certain position, figure (9), and when combined with the two figures in black, it gives the impression of being a smiling face that bears the formal characteristics of the clown character (the symbol of the second character in the film (Figure 10). This is because the mental image can achieve a kind of "visual expressions that lie in any subject or any perceptual incident, and appear as active dynamic forces". (Hamid, 2001) So the recipient relies on the presence of his mental stock of images, "collected and imagined by every mind with his calculations based on his experiences, backgrounds, and his own desires. The vocabulary of the image is subject to overlapping and interaction", (Makrum, 1999) the visual for receiving, so he chooses what affects his imaginary world and determines what it fits his visual thinking in the form of "acquired a new meaning, as it is no longer a superficial membrane, but rather a tangible dynamic unit that has meaning in itself outside of any additional element", (Hussein, 2007) and this is represented in Figure (11) that represents the design of a book cover. The content of his article is about the phenomenon of (pareidolia), so when designing the visual content of the cover, the designer used two forms, one of which represented the statue of the head of (Sargon of Akkad) (Figure 12). The other is the map of the continent of South America, Figure (13), and when applying the intellectual vision of the phenomenon to understand the design of the cover, receiving the visual output will be seeing the extent of symmetry and congruence of the lines of the outer borders of the two visual forms. Another step forward: if he does not find familiar patterns, he simply invents some of them). (Dobelli, 2013) Through mental images, the mind's activity develops when the recipient picks up external formal stimuli that interact with his image storage as a result of the accumulation of information. and external experiences.

The results and their discussion:

1- Unclear and vague formal patterns appeared within the diversities of graphic designs. To understand and interpret these vague patterns is done through the phenomenon of (pareidolia), which helps in determining its formal connotations at various levels of awareness and perception. It contributes to showing how to interact with the new visual form, and to what extent The change in its form does not affect the meaning and content of the design and the understanding of the content of its design idea.

2- The observations of many graphic designs are achieved according to the phenomenon of (pareidolia) as it is a personal analysis of the vague formal stimuli that link cognitive and visual perception with a formal work that reflects unconscious interactions with perception .It reveals a wide range of responses that can appear from visual stimuli that appear at first sight Without features, then its clear composition begins to appear.

3- When employing the phenomenon of (pareidolia) in a specific design, the designer must emphasize the necessity of stimulating the recipient intellectually by activating the process of exploring the graphic design. IT is done through perception and evoking mental images and linking them automatically to the visual form and in a manner in which the shapes are arranged, to achieve compositional balance in Typical formal formations that are visually aware and intellectually comprehensible.

4- Some forms bear ambiguity and visual illusion, but it does not mean that it is impossible to understand them. When activating the imagination and the referral it contains that necessitate the presence of mental images, the recipient is given a plurality of images inferring the significance of the form to complete understanding and explain what is absent, to achieve access to the meaning of the design idea.

5- By activating the use of (pareidolia) in graphic design, it is possible to reach the meaning of the required design idea and evoke the hidden meanings in its formal and intellectual content. The newly created forms are transformed into new semantic overtones and an intense evocation of imagination despite the almost absence of structural clarity and the pictorial origin of these forms in the design structure. It contributes to stimulating the analytical readings of the recipient

6- Mental activity according to (pareidolia) does not hesitate to rephrase the design idea that is not clear for the shape in the graphic design in another vision that is clearer and more understandable to the recipient according to his interpretation of the shapes. Thus an end to the limited thinking and restricted in a stereotypical manner, which can be used in Graphic designs for age groups in primary school stages

that help them activate the mental aspects and a more effective thinking mechanism.

Figure (1) /<https://www.feeldesain.com/max-shoes-you-are-what-you-wear.html>



Figure (2) /<https://pixabay.com/photos/tree-face-forest-nature-smile>



Figure (3) /<https://posterspy.com/i-see-dead-people-the-art-of-the-hidden-skull>



Figure (4) /<https://www.forbes.com/sites/evaamsen>



Figure (5) <https://posterspy.com/i-see-dead-people-the-art-of-the-hidden-skull>

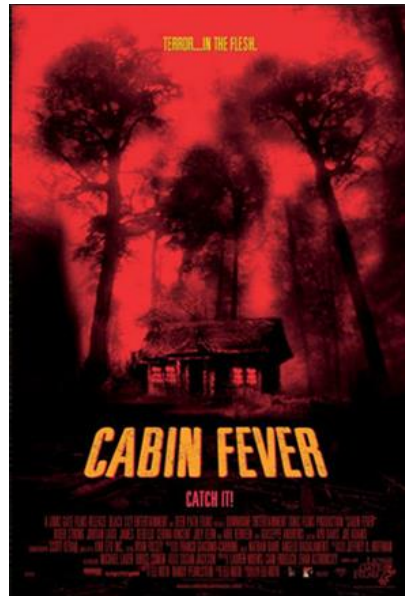


Figure (6) <https://pic.i7lm.com>



Figure (7) /<https://posterspy.com/i-see-dead-people-the-art-of-the-hidden-skull>



Figure (8)



Figure (9) /<https://www.youm7.com/>



Figure (10) Sources / <https://soundcloud.com>



Figure (11) <https://www.amazon.com/Pareidolia-World-worlds-definitively-mysteries>

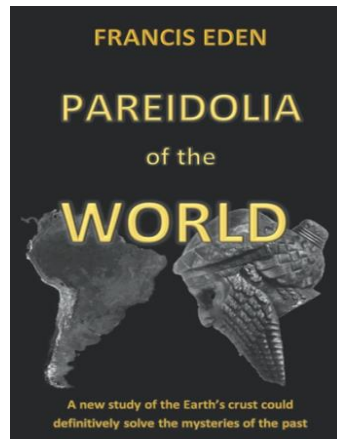


Figure (12) <https://ar.wikipedia.org/wiki>



Figure (13) <https://m.facebook.com>



Bibliography

- (n.d.). Retrieved from - <http://www.alriyadh.com/1542283>.
- (n.d.). Retrieved from - <http://blogs.psychcentral.com/.../what-does-pareidolia-mean>.
- Robert G, & Bednarik. (2017). Pareidolia and rock art interpretation. Brno: Anthropos Institute.
- Amin Saleh, . (2010). Surrealism.. in the eyes of mirrors (2nd ed.). Beirut: Dar Al-Farabi.
- Andrew Wodehouse, R. B. (2018.). PAREIDOLIA: CHARACTERISING FACIAL ANTHROPOMORPHISM AND ITS IMPLICATIONS FOR PRODUCT DESIGN. Department of Design, Manufacture and Engineering Management.
- Coello, Y. (2005). Spatial context and visual perception for action. University of Lille, 39.
- Dobelli, R. (2013). The Art of Thinking Clearly, by Sceptre. Great Britain.
- Gianluigi Guido, M. P. (n.d.). EFFECTS OF FACE IMAGES AND FACE PAREIDOLIA ON CONSUMERS' RESPONSES TO PRINT ADVERTISING. Department of Management, Economics, Mathematics, and Statistics, p. 23.
- Hamid, S. A. (2001). Aesthetic Preference / A Study in the Psychology of Artistic Appreciation. Kuwait: National Council for Culture, Arts and Letters.
- Hodgetts, R. J. (2017). Pareidolia A Visual Inquiry into the Perception of Ambiguous Images. Tasmanian College of the Arts, 5.
- Hodgetts, R. J. (2017). Pareidolia A Visual Inquiry into the Perception of Ambiguous Images. Tasmanian College of the Arts, 1.
- Hussein, M. H. (2007). The Aesthetics of the Literary Text, Studies in Structure and Semantics (1st ed.). London: Dar Al-Sayyab for Printing, Publishing and Distribution.
- Ibrahim , F. (1986). Dictionary of Literary Terms, Workers. Sfax: Cooperative Printing Press.
- LEE, J. I. (2016). popular pareidolia and the proliferation of Meaning. Available from Sheffield Hallam University Research Archive (SHURA), 2.
- Liping, B., & Xing , H. (n.d.). The Modeling and Aesthetic Characteristics of Graphic Design. 1Arts College in Huangshi Institute of Technology.
- Liu-Fang Zhou, M. M. (2020). Do you see the "face"? Individual differences in face pareidolia. Journal of Pacific Rim Psychology, 14(2).
- Makrum, H. A.-R. (1999). Mental Conception (1st ed.). Cairo: Wahba Bookshop.
- Mustafa, A. (2017). Nostalgia for Myth/ Chapters in Pseudoscience. United Kingdom: Hindawi Foundation.
- Robert , G. (2016). ROCK ART AND PAREIDOLIA. Rock Art Research, 33(2), 168.
- Robert G. Bednarik. (2016). ROCK ART AND PAREIDOLIA. Rock Art Research, 33(2), 168.
- Stephan K. Chalup, K. H. (2010). Simulating Pareidolia of Faces for Architectural Image Analysis. International Journal of Computer Information Systems and Industrial Management Applications (IJCISIM), 2, 262.

Wurm, F. (2015). *Philosophy in 100 Words* (1st ed.). (M. Jedidi, Trans.)
Algeria: Al-Ikhtif Publications.