

IDEOGRAPHIC SYMBOLS, MEANINGS IN VISUAL COMMUNICATION AND DESIGN

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ABSTRACT

This paper discusses the ideographic symbols in the context of visual communication and design. It covers various dimensions of symbols as an expression of culture in the visual and spiritual senses. The ideas and concepts in design are symbolized to reflect meanings as they are experienced and observed by the users. It can be understood from the discussion that symbols and visual expressions are examined in creative works to understand the intention of the designers and the interpretation of the works. Principles of forms, colour, pattern and beauty were used to interpret the symbols and influence meanings developed by the observers both visually and spiritually.

Keywords: Ideographic symbol; visual communication; meaning

1. INTRODUCTION

The term ideograph - representing ideas (or meaning) with graphic symbols –exposes in the relationship between meanings and graphic symbols. What is called a character in ideographic scripts is actually a syllable. Human communication is a process in which numerous factors, such as language, attitudes, knowledge, social and cultural influences and communication skills of the individuals operate within several dimensions simultaneously. Communication consists not only of the written or verbal language but also in sets of codes or code systems. These include object representation, abstract representation and abstract non-representation.

The object representation or realistic symbol (also called sign vehicle) is iconic or pictorial in nature. This means that it closely resembles the real object or form. These representational symbols and models are created using visual elements techniques and media to represent objects, building, people, and environment. Abstract symbols such as pictographs have a general likeness to the original subject so that viewers can associate them with the real object, person, or environment.

Abstract non-representation symbols are images that have no physical likeness to real objects, people, or places. They may represent a concept or idea, summarize an action to be taken, or act as a symbolic code, e.g. the Morse Code (a code in which letters represented by the combination of long and short light or sound signals). Abstract Representation or Pictograph is a system that represents significant ideas and concepts other than nouns. It is a simplified drawing of objects or graphic, but not for communicating complex ideas, feelings, concepts, and actions. Pictographs are vital when there is a need to communicate in the absence of a common language or script. Basically, it can be defined by many different names, such as pictorial symbol, pictograph, pictogram, signs, symbol, icon and so on. Over time, pictographs or pictorial symbols have been recognized as an “Information Graphic” and became a form of public communication. Generally, this non-verbal communication exists in every field including those in public service, concessions, processing activities as well as in regulations.

2. THE TRANSITION FROM PICTOGRAPH TO IDEOGRAPH

Overtime pictograph- based on languages developed into a system to represent ideas and concepts other than nouns. Pictographs were combined to signify is, rather than increase objects. When pictographs must be interpreted with knowledge rather than simply recognized and identified to read, they are considered ideograph.

An ideograph also is known, as ideogram is the combination of two or more pictograph to represent concept- for example, the pictograph of a woman combined with the pictograph of a child may represent the idea of pregnant even though it does not show a pregnant woman. Ideograph cannot be looked at and understand, there is an element of abstraction to ideographs. They represent the idea presented, but they are not a simplified drawing of the concept. Ideograph needs an interpreter or translator. Since an ideograph is the integration of pictographic symbols to represent conceptual ideas, note that a culture could not have ideograph if it did not already a working vocabulary of pictographs. Also, every culture has different combinations of somewhat universal pictographs to represent a concept based on the foundation of their specific verbal language, their spiritual beliefs and their social structure.

3. DEFINITIONS AND CONCEPTS RELATING TO IDEOGRAPH

An ideogram or ideograph (from Greek *iδέα* *idéa* "idea" and *γράφω* *gráphō* "to write") is a graphic symbol that represents an idea or concept. Some ideograms are comprehensible only by familiarity with prior convention; others convey their meaning through pictorial resemblance to a physical object, and thus may also be referred to as pictograms. Examples of ideograms include way finding signs, such as in airports and other environments where many people may not be familiar with the language of the place they are in, as well as Arabic numerals and formal

languages (mathematical notation, logic, UML), which are used worldwide regardless of how they are pronounced in different languages.

The term “ideogram” is commonly used to describe logographs in writing systems such as Egyptian hieroglyphs, Sumerian cuneiform and Chinese characters. In the history of writing symbols proceeded from ideographic (e.g. an icon of a bull’s head in a list inventory, denoting that the following numeral refers to head of cattle). Bronze Age writing systems used a combination of these applications, and many signs in hieroglyphic as well as in cuneiform writing could be used either logographically or phonetically.

4. THE MEANING OF SYMBOLS

The meaning symbol on the whole linked as a symbol of something culture and civilization as explained by Fontana (2003):

“Symbols are profound expressions of human nature. They have occurred in all cultures at all times, and from their first appearance in Palaeolithic cave paintings they have accompanied the development of civilization. However, symbols are more than just cultural artefacts; in their correct context, they still speak powerfully to us, simultaneously addressing our intellect, emotions and spirit.”

Fontana (2003) explains that human’s communication is depending overall to the symbol in writing form or speech, image or facial expression. This symbol is our awareness of what we face by reality, which accounts our symbol to object, implementation and concept around us. But there is another aspect of symbolism equally essential compared with the reality that can be associated with our inner nature, it is rooted from the psychological and spiritual dimensions. In internal quality, this symbol represents profound cleverness and intuition, which is resulted in direct expression become incomprehensible.

He also clarified that ancient civilization recognized this symbol power and application widely used as art, religious, myth and practice. This ideology still exists until now, where it is applied in the field of arts, literature and film. A symbol has deep meaning and used effectively in positive and negative emotion through advertising and political campaign. According to therapist and psychologist Carl Jung, symbol moves human nature without aware of the expression and reaction from the profound power. We realize but could not describe though word. There is symbol type associated with universal language, where his image and meaning manifested in nearly identical form and power through culture and human civilization.

Fontana (2003) commented that because of the profound spiritual realization, human (whether in the eastern or western civilization) use symbol in spiritual life and worldly lives. Psychologist,

anthropologists and historians agree that symbol would be vital in showing interest where information is shared through the symbolic world. In this regards, Venugopalan (2001) links symbolic meaning with internal spiritual manifestation based on the religious practice which is universal by nature. According to him:

"From the ancient period symbols played an important role in the religious rituals – the importance was because of the awareness that all the life form is made of the five basic elements, with the soul residing within the preview of the five elements."

From the above opinions, it can be understood that the meaning of the symbols plays a major role in human communication whether by writing, speech, image or expression which account reality and becoming the symbol to object, implementation and the concept of thinking around us.

4.1 The symbol system

Advantage and complexity in evaluating the notation are by seeing through someone's creativity. It can be associated with the basic system namely natural human character and certainty understood but none can be delivered through a word. Therefore Fontana (1994) relates symbol with mental reality and emotion as in his statement:

"A symbol system is nothing less than a symbolic map of reality. It represents the topography mental and emotional realm that reveals itself to the inner eye. Just as a city cannot be properly appreciated unless we allow ourselves the time and space to study it in every detail, so too a symbol system can only reveal its full meaning if we acquaint ourselves with all its aspects."

This statement could be associated with one symbol with other symbols. Each symbol was part of notation total amount displayed and it can be associated with how our mind thinks and size up someone or something based on notation result. Researcher opinion is supported by Fontana (2003), which states that detailed study of this notation can give more meaningful knowledge and comprehension to mind in our life. Due to this, anyone who wants to understand this, he must master the spiritual map.

"Notation saw as able produce one very effective system, invariably it produced. This is due to mind cultural factor and height individual involved. Of has some high artistic nature can produce visual sense by using image picture. For someone who has a sense of height, on the other hand, their body energy focused on that system flow (for example, yoga practice)".

4.2 The symbolic interpretation

A symbol can be interpreted in forms and different ideologies. Interpretations of something are dependent on the symbol of someone's ideology and its evaluation. Although the interpretation of meanings is similar, his acceptance may be different. It could be influenced by based on experience, involvement and a person's knowledge. Symbol interpretation contains element as decorative as art, which symbolizes the internal beauty through various designs. As stated by Gombrich (1980):

“The study in the psychology of decorative art was to establish and test the theory proclaimed, the theory that there exists a sense of order which manifest itself in all styles of design and which I believe to be rooted in man’s biological heritage.”

The interpretations of symbol design of geometric shape based on Islamic concept that had interpreted according to al-Quran like those explained by El-Said, El-Bouri and Critchlow (1993) can also be a reference in understanding the meanings of symbols in its spiritual sense:

“The foundation and principles by Issam El-Said in geometric design identified as ‘Usul’, which he conceived as the system of creativity in the Islamic artistic heritage and as the conceptual essence of al-Mizan, the ‘balance’² mentioned in Al-Qur'an : “and the sky He exalted and established the balance...” (Surah Ar-Rahman: Verse 50).

According to Merchant (1997) and relating to Keith Critchlow's opinion and in the light of the experience and knowledge of creative interpretation and process symbol, the knowledge becomes an important foundation in comprehending his symbol and interpretation:

- a. How form, colour and pattern produce and manifest in various expressions and designs
- b. Understand meaning of the design and what inspires the designer
- c. Evaluate the value of the design and the design process

At the same time, through interpretation of the symbol, awareness of theory of integration will be achieved through internal design training. The spiritual expressions of past designers were interpreted within aesthetics in religious design and divinity and culture that can be experienced and translated into innovative creations. Merchant (1997) also clarified that according to art comprehension geometric and tradition, a shape of a circle was the beginning for the paintwork drawn. By using compass tool, corner straight line or square, painter act as a mirror reflection on paintwork union. As a result, the representation is expanded through a creative process and return to the central point. Direct movement in the shape of a circle is natural form shared together in the physical form and different elements such as sun, month, star and planet. Here,

knowledge of geometry had been linked with the appreciation of the creation of universe and remembering of God.

According to him, in American native education, circle gives meaning in life and function as religious sanctity and art. The aim was to achieve beauty by searching to the bottom of nature. For them, each creation is native to shape of a circle, therefore all thing existed would try to be a circle. This is because this world power is moving from the shape of a circle. Therefore, designers and artists in the west link principle comprehension of geometrical shape with religious sanctity and artistic tradition. They study Hermetic line, Islamic thread painting, painting tradition relating to the 'centre of perennial wisdom' known in Greece and Egypt and geometrical shape comprehension which symbolises Christ life and saints spearheaded by Giotto. It is known as perfect circle line without using a compass as a tool.

Based on the above discussion, researchers deduce that through an understanding of form, we can assess the earlier meaning of symbol and the interpretation of the creation. Nevertheless, the method used to evaluate form, beauty, colour and pattern associated with the geometrical shape principle and application while the form manifested based on the natural element was not emphasised adequately. They also make 'the sense of order' become distinctive and contain the variation of potential designs which have yet to be experimented widely. As such, this paper discusses the creation of potential symbols based on natural environment and system, which enable to orderly transform shapes and forms and therefore create more innovative design products.

5. THE IMPORTANCE OF SYMBOL IN THE VISUAL COMMUNICATION

Symbols play a major role in human's communication beings whether by writing, speech, image or expression. Visual symbols are available in building a wall, vehicle, package, advertisement and printed materials. The idea of a symbol is usually based on things around us.

Symbol and visual expressions are examined to understand and evaluate art and design products. They play a very important role in society especially the business community, organization, campaign and for government and private institutions. Symbol also applied to famous products at international level. Naisbitt (2006) stated his opinion on the interest in symbol and visual communication and their future influence as:

"The history of civilization is a history of communication. If communication shifts from word to visual, we need to learn a new language to interact. The competitive edge in a visual world will be an education in technology and the art—a technology-driven brain and the lyrical heart. We need computers and poets"

Naisbitt (2006) further commented on the power of design:

"Design has emerged as one of the world's most powerful forces, a force with many faces. There is much talk about adapting product design to various markets around the world, translating it across different cultures. One emphasis at the moment is to design "platform" or "architectures" around which product - especially automobiles - can be tailored to a specific market. But perhaps that problem is with the initial design itself. Some products do speak a universal language of design that is received by all cultures."

Naisbitt (2006) also explains the interest in design and symbol in visual communication and outlines reasons on his prediction in the future:

"How can we sure that we are in the shift from the written word and our imagination to instant picture consumption—a visual world? In the discussion of the Mindset, "the future is embedded in the present,"

The seven forces pushing in the direction of a visually dominant world are reflected in:

1. The slow death of the newspaper culture
2. Advertising - back to "a picture is worth thousands of words"
3. Upscale design for common goods
4. Architecture as visual art
5. Fashion, architecture, and art
6. Music, video, and film
7. The changing role of photography

Naisbitt (2006) then explains that the emergence of symbol and design in the future will be featured with "Signature Product", where designers' brands and names will be symbolised on marketing in the visual world:

"Today, architecture as visual art is more accepted than ever before. Big international architects are at least on a popular par with the celebrated artists working today. These days we need names that are recognized the world over, from Tokyo and Shanghai, New York and Paris"

Bakhtiar (1997) linked human spiritual transformation with design symbol that symbolises the spiritual journey to God (Allah S.W.T):

"It is through symbols that one is awakened; it is through symbols that one is transformed; it is through symbols that one expresses. Symbols are realities contained within the nature of things. The entire journey in God is a journey in symbols, in which one is constantly aware of the higher reality of things."

6. THE ELEMENTS IN A PICTOGRAPH, SYMBOL AND ICONS IN VISUAL COMMUNICATION

A symbol can be an object, picture, written word, a sound, or particular mark - that represents something else by association, resemblance, or convention, especially a material object used to represent something invisible. Symbols indicate or serve as a sign for and represent ideas, concepts, or other abstractions. For example, in some countries, a red octagon is the symbol that conveys the particular idea of "STOP". Other common examples of symbols are the symbols used on maps to denote places of interest, to indicate a battlefield. Well-designed icons and symbols can have the following advantages over written commands and labels. They can be:

- More distinctive but simple
- More efficient for denoting spatial attributes
- Easier to recognise and remember over long periods of time
- Easier and faster to learn when the size of the symbol set is small
- Language independent

Icons used for ICT interfaces must be easy to understand. Currently, the 'enter' button on most keypads uses a 'return' arrow which is a left-over from the old style typewriters where this icon indicated a 'carriage return'. The meaning is not obvious unless you are old enough to remember moving carriage typewriters. However, the use of a simple icon, such as the 'return' arrow, is approved of by the Apple Inc. (2008) in Apple Human Interface Guidelines, they recommend using one easily recognisable object because the basic shape or silhouette of an icon can help users to quickly identify it. Ziegler and Fähnrich (1988) also state that graphical symbols should be constructed with as few graphical components as possible - usually not more than 2 or 3 components. Icons such as the icon for on/off seem to evolve with little thought to the difficulties users might have in understanding them. In many cases it would be better to use the appropriate words rather than leave the users to guess the. This latter suggestion has been confirmed by an investigation carried out by Fennell (2007) into icons and labels for buttons on audio devices, which revealed that partially sighted people show a significant preference for the button to be labelled with a word, rather than an icon, when possible.

6.1 Size

According to the Guide E.T.S.I standard 201 379 (1998), no general recommendation can be given on the minimum acceptable size of an icon; this is because what is acceptable depends on a number of parameters:

- The users

- viewing distance between the user and the interface
- The complexity of the symbol: a simple symbol with one or two elements (e.g. The ISO/IEC symbol for on/off) can be reduced to a very small size and still recognized by most people while a complex one may not
- The display qualities of the medium including the resolution, the contrast, the focus and glare
- The viewing conditions including environmental factors such as poor illumination, and physiological and psychological factors such as fatigue and work load.

For this reason, the best way to assess the minimum acceptable symbol size is to design the symbol and test it with test subjects from the relevant user or target population.

6.2 Shape

According to the Guide E.T.S.I standard 201 379 (1998), on some equipment, particularly small machines, special manufacturing considerations or lack of space preclude the use of graphical symbols of the exact recommended shape. In such cases, the design of the graphical symbols used may be modified provided that their pattern differs as little as practicable and still conveys clearly the intended meaning.

6.3 Colour

Colour can be informative when used to link information as long as it is used in moderation. It does this by linking elements together, to indicate organisation and relationships. Colour helps in searching tasks by drawing attention. The Apple Human Interface Guidelines (2008) recommend using colour “judiciously to help the icon tell its story”. Colour should not be added just to make the icon more colourful and smooth gradients typically work better than sharp delineations of colour. Optimally 2 - 4 colours should be used.

Users also look at a colour to be able to identify its purpose. For example, red can be associated with ‘stop’ or ‘danger’ but a significant proportion of the male population in the UK is red/ green colour blind. Some people with retinitis pigmentosa may have difficulties reading a red display. A lesser proportion of the population is blue/ yellow colour blind. Therefore use of colour alone to signify a meaning should be considered carefully. The adequate contrast between symbol and background is essential. Woodson (1981) recommends that some type of border should always be used around a symbol to prevent it from blending with background images.

An investigation by Fennell (2006) into a personal preference for the colour contrast of icons revealed a preference for the following colour contrast option: black icons on a white button, with a black surround. In cases where a black/white colour combination is not used, black can be

replaced by another dark colour (such as navy blue or dark brown). Similarly, white can be replaced by another light colour (such as cream). The contrast of the icon and the button should be kept as high as possible.

7. SYMBOLISM: VISUAL EXPRESSION AND ITS MESSAGES

Symbol relates strongly to tradition and to the life of current society. Message sending in symbol expression gives effective impact to us, with resistance to achieve spiritual and physical balance in life. Every human surely experiences sweet and bitter memories, good or evil. Symbolically, the impact of kindness would bring brighter and harmonious life. Evil would bring human with darkness. The battle between good and bad continues where awareness and balance layer external and inner self until peace is achieved at a certain level.

Through discussion on the visual symbol, messenger tries to comprehend and form awareness for an effective function for balance through art symbols in facing the challenge of the 21st century not only to individuals but also to the world community. The world community is increasingly expanded and with crowded population and almost no more space for breathing. It is hard for the society to appreciate symbolic or implied meaning. We overly chase material progress to increasingly extinct its capacity in looking for meaning. Through this writing, messenger tries to show external and internal issues linked directly with spiritual and physical spaces and for more effective appreciation of symbol in the environment. To identify this problem, research should start to gauge society to be more sensitive towards symbols and meanings inside daily life. Messenger also tries to find out a suitable method to increase visual appreciation of symbol. Besides increase in the artistic value, awareness in appreciation of visual and animated images, more effective alternative effort in communication can expand visual and artistic values in every human.

Lack of reading among society has motivated messenger to stress on the method of communication through image and text more strongly. A message can be understood by 'indirect' by using images and it is more time saving compared to text method. With the use of images and visual magnetic, it will increase people's interest to understand the message. The use of symbol and image as a new form of communication is in keeping with the development of time technology currently felt in this century and able to educate the community to be more innovative.

8. THE FUNCTION AND MEANING OF IDEOGRAPHIC SYMBOLS

Symbol functions as a medium to awaken and change a person. It is even medium for self-expression. Symbols are realities or the nature of being. For example, in the knowledge and appreciation of Sufi, a symbol is considered as a tool to experience Divine reality, which brought

a human being to a higher level of closeness to God. Symbols imply the inmost meaning with God, understandable and known by a person. This will form his perception and belief to the truth. It would bring human to return from forgetting to remembering God the great Creator.

Every event on this earth is a symbol. It is a sign received through external and internal senses (outer senses and inner senses). Each symbol contains connotation that can interpret differently and parallel to the experience every individual. God and human's form of communication with this symbol rarely discussed as a knowledge that can open the mind and human heart, whereas non-verbal communication can be experienced clearly and able to be understood as a message sent effectively by the human's internal sense sensitivity. It opens to the flowing of inspiration and idea, therefore, more creative and innovative.

9. DESIGN IDEOGRAPHIC

The objectives of pictograph production in visual communication were as follows:

- To enhance value, aesthetic and meaning of ideograph symbol in a message
- To support a method for society's understanding of messages and values through ideograph symbol
- To invent effective ideograph or symbol design and to create a system in visual communication
- To create awareness of the importance of ideograph symbol through the application digital technique and information technology
- Through visual, design ideas could be delivered and presented through various methods
- A medium to communicate and deliver thinking, idea and expression.

Through ideograph symbol, visual expression of a visualizer can be developed and appreciated. The content of their messages are to understand expressions or symbols of this world and the states of the object and environment. It is also to evaluate design problem solving and increase visual sensitivity and form detail. It allows designers to increasing sensitivity to visual relationship between objects and explores and form idea visually. The process supports the development of concept and ideas. The emphasis of the production process of ideograph symbol can be simplified as follows:

- Application of character and identity to the production of ideograph symbol in conveying messages. Philosophy and design are manifested through technology and visual method
- Transformation of idea, concept and meaning of new discovery on ideograph symbol is generated from designer's experience and view

- Formation of an environment using a symbol as ideograph symbol functions as means of communication and sharing of information in our daily routine
- Production process of ideograph symbol function as basic forms in graphic design to create symbols that can represent the transformation of human and environment.

The visual communication beyond the visual sign and symbol are able to give an effective impact to visual sensitivity and also the understanding of the meaning presented which are able to attract attention and focus. Colour and texture are the important elements to support the visual impact. Information based on original symbol, topography and information evolve to become a visual composition and through this approach and process, we are enabled to create a good ideograph symbol and achieve our expression.

10. CONCLUSION

Symbols tradition plays an important role in visual communication. It is linked to our daily life and the current society. Messages through symbolic expression are quite effective and are more meaningful rather than spoken words, especially when we face our life resistance and achieve our life balance.

Every human experience in life and at the end will be siding towards good or bad states. The effect of good state would bring human direction upward, bright and harmony. The effect of bad state would bring human downwards, not in balance in life and spiritually in the state of darkness. Our struggle between these good and bad states is always a challenge in us to achieve a safe zone, whereby there is a balance between awareness and turnover needed to find peace in the external and inner self.

In visual expression through symbols, the author tries to comprehend the awareness through visual symbols in facing the present life not only to individuals but also to all communities. World community is increasingly expanded in a rapid manner - as a ship compact with human population until it is too crowded and not enough space to breathe, and we are forced up to a higher level on that ship to seek fresh air and more space so that we can survive in this world. This will never end until we really search for spiritual knowledge and create healthy activities that will benefit us in worldly life and hereafter.

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REFERENCES

- [1] Fontana, David. *The secret language of dreams: A visual key to dreams and their meanings.* Chronicle Books, 2003.
- [2] Venugopalan, R. *Transformation of Pyramid Shape that Represents Universal Energy.* Soul Searchers: The Healing of Pyramid. 2001
- [3] Gombrich, Ernst H. "The sense of order." (1980).
- [4] El-Said, Issam, Tarek El-Bouri, and Keith Critchlow. *Islamic art and architecture: the system of geometric design.* Garnet Pub Ltd, 1993.
- [5] Naisbitt, John, Mind Set, and Reset Your Thinking. "See the Future." *Londres: Collins* (2006): 57-67.
- [6] Bakhtiar, L. *Design Process of Symbolic Meaning in Islamic Sufism.* Sufi Expressions of the Mystic Quest. 1997.
- [7] Apple Inc. Apple Human Interface Guidelines: User experience. Apple Inc., California. 2008.
- [8] Ziegler, J. E., and K-P. Fähnrich. "Direct manipulation." *Handbook of human-computer interaction.* 1988. 123-133.
- [9] Fennell, C. C. BaKongo identity and symbolic expressions in the Americas. *Archaeology of Atlantic Africa and the African Diaspora, Indiana University Press, Bloomington*, p. 199-232. 2007.
- [10] Guide, E. T. S. I. Human Factors (HF); Framework for the development, evaluation and selection of graphical symbols. 1998.
- [11] Woodson, L. *From cases to composition.* Scott Foresman. 1981.