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ITJ

ISSN 1812-5638

# INFORMATION TECHNOLOGY JOURNAL

**ANSI***net*

Asian Network for Scientific Information  
308 Lasani Town, Sargodha Road, Faisalabad - Pakistan

## Methods of Creative Design of the Jewelry's Shape

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**Abstract:** With the development of society and improvement of consumption concept, human demands for high quality jewelry design and its spiritual function has become higher and higher. In this paper, morphological classification and connotation of jewelry is introduced firstly. Three levels and the general law along with the method of creative design of jewelry are analyzed then. What is followed is further extension to the methods of creative design. At the same time, with concept from Morphology and Semasiology, this paper gives a deep interpretation of the spiritual and cultural semantics with examples.

**Key words:** Jewelry, shape semantics, creative design, spiritual function

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### INTRODUCTION

**Connotation of shape semantics:** Form is the visible shape or image that exists in certain interspace and it refers to the manifestation and composition of an object under certain conditions. The word "form" means the shell of tangible thing. It is a physical concept and, as well, is the bridge between the designers and the public. "Form" also refers to the expression and state. It is the connotation of shape and the reflection to people's feelings. It is a psychological concept (Cheng, 2008). Besides the visible shape, it is the inner spirit and temperament of an object. Shape semantics can be divided into two parts: Extensional semantics and connotative semantics. For products, extensional semantics includes those determinate, conspicuous or commonsense meanings. In other words, it refers to what the product is in nature. Meanwhile, connotative semantics means perceptual cognition. It usually refers to the social cultures and personal associations (such as ideology, emotion, etc.).

**Connotation and meaning of creative design of jewelry:** The creative design of jewelry emphasizes on the form and shape of jewelry. Its main object of study is graphic language including graph, image and pattern. The specific symbol system in jewelry design contains shapes, structures, colors, materials and other

factors. Designers spread their design intent and ideas through use of shape semantics (Liu, 2009).

### MORPHOLOGICAL CLASSIFICATION AND CONNOTATION OF JEWELRY

The jewelry design modality can be classified into realism and abstract forms. Realism forms which is also called concrete forms, means shapes that have existed in nature. They are apt to be observed or felt in our daily life and also can be noticed directly from our experience. Abstract forms are neither natural nor artificial. They are created through ideas (Wang, 2012).

#### Realism forms

**Natural forms:** Natural forms are source of inspiration for designers. It contains everything, animals, plants, natural sceneries included, that is concrete in nature and has nothing to do with mankind. In addition, it can be further divided into inorganic and organic forms. Natural forms are eternal theme for jewelry design. For instance, plum blossoms, orchid, bamboo, chrysanthemum and even cats are extremely common in jewelry design (Zhang *et al.*, 2001).

Inorganic forms are based on natural rules. It is a passive action and it appears different images with the development of natural environment and changes of time. For example, the Fig. 1 followed is a Swedish bracelet that shows annual rings like trees.

**Artificial forms:** Natural forms exist long before human appeared in the world. Besides accidental occurrences, artificial forms are created with human wisdom, knowledge and technology.

Artificial forms can also be further classified into realism and abstract forms which is usually along with strong meaning and subjective feelings (Wang, 2012). Realism forms is to describe the things in an absolutely objective way so that other people can easily recognize it. Depend on objective things, abstract forms describe specific shapes according to human subjective feelings in exaggerated or simplified ways (Zhu and Xia, 2009).

**Abstract forms:** Abstract forms do not have any objective meanings and are created by compass, straight

rule and some other tools. Abstract forms can also be made in another way-change the realism forms little by little until others are unable to tell what it is originally or what it means originally. The Fig. 2 shows an example from a French jewelry designer called Mathalie Jean.

Abstract forms show different features in different stages. It can be divided into following parts: Geometric shape or not, funny shapes, meaning shapes and feeling shapes.

### THREE LEVELS OF CREATIVE DESIGN OF JEWELRY

As Picasso said, "There is no absolute art-everyone needs to begin with something concrete." The development of forms usually needs to experience following steps: (1) Imitated form, (2) Abstract form, (3) Geometric form and symbol form.

There are numerous ways of design thinking. Especially for jewelry design, we can see it in three ways-imitated design, Inherited design and creative design.

Imitated design is to imitate parts or all of another thing in design. Bionics Design is the most common and it imitates natural things. Inherited design is to keep the pith of the original design and improve other parts.

Creative design is to make full use of creative thinking, creating new things from a unique perspective. It requires designers' solid knowledge skills and delicate perceptions. As shown in Fig. 3 and 4, the first one is the Indian Sangam golden jewelry and the second one is the work of English artist Anna Lorenz, two broken contact lens inside a glass necklace pendant.



Fig. 1: Design of Swedish bracelet



Fig. 2: Design of abstract form



Fig. 3: India sangam gold jewelry



Fig. 4: British artist Anna Lorenz Works: In two pieces of broken glass pendant which is invisible

#### THINKING MODE OF CREATIVE DESIGN OF JEWELRY

**Use the principle of the beauty of form:** The principle of the beauty: Neat and repeat (as shown in Fig. 5), symmetry and uniformity (as shown in Fig. 6), balance and equilibrium (as shown in Fig. 7), rhythm and meter (as shown in Fig. 8), ratio and division (as shown in Fig. 9), harmony and contrast (as shown in Fig. 10), principal-subordinate and echo (as shown in Fig. 11), etc. These principles are more applied when designing abstract forms.

**Use the principle of the composition of point, line and plane:** The base of forming factor in jewelry design is point, line, plane and body. They have many features like concrete and abstract, nature and chance, imitation and creation. It is a process of “design-create-redesign”.

**Point in jewelry design:** Point is the most fundamental and the most simply composition unit. It varies in its size, the color difference between picture and background, the distance away from optic center, shapes. Besides the position it shows, point can also indicate size and shape. It has something to do with the structure and character of the whole image.

In jewelry design, the shape of the point includes circle, oval, square, rectangle, triangle, polygon and so on. Not only does point differs in its size and pattern but it also differs in its color and material. It always acts as polish for the featured portion in design. Therefore, point is often used to highlight a certain position on jewelry. When designing jewelry, gem often acts as main part and



Fig. 5: Neat and repeat



Fig. 6: Symmetry and uniformity

others are slave. As point is the most elementary unit in composition, a gem in jewelry is a point, an array of gems is a line and several arrays are a plane as shown in Fig. 12.

**Line in jewelry design:** Line, as the track of point's movement, is full of power. So, based on shape, position, direction, line shows a sporty image of power, speed and direction which are main factors that determine the feeling of line. Lines are distinguished by its touch: Hard or soft. In jewelry design, the length of line is a significant feature. It appears brisk, nervous, extensive and sporty. In forming the body, the position of each line can result in different effect, additionally, produce different feelings like crossing, rhythm, layering and extension. If changing two parallel and repeated straight lines into curves, sense of space will be produced. If the length is changed and at the same time Gradient is produced, the sense of depth is going to show up. Changing the gap between two lines can produce shade and layering while changing the



Fig. 7: Balance and equilibrium



Fig. 8: Rhythm and meter

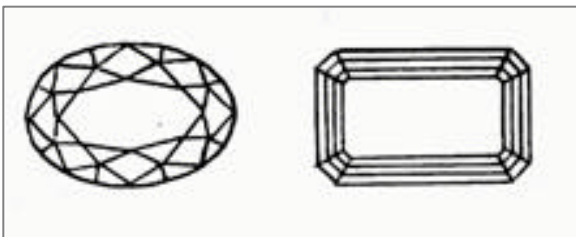


Fig. 9: Ratio and division

thickness of lines produces sense of direction and sport. Straight or bend, long or short, thick or thin, flexible lines play an important role in modern jewelry design as shown in Fig. 13.

**Plane in jewelry design:** Either expanding or broadening lines can produce plane. If a plane is folded, it will present an effect of three-dimensional. Plane has the sense of



Fig. 10: Harmony and contrast



Fig. 11: Principal-subordinate and echo

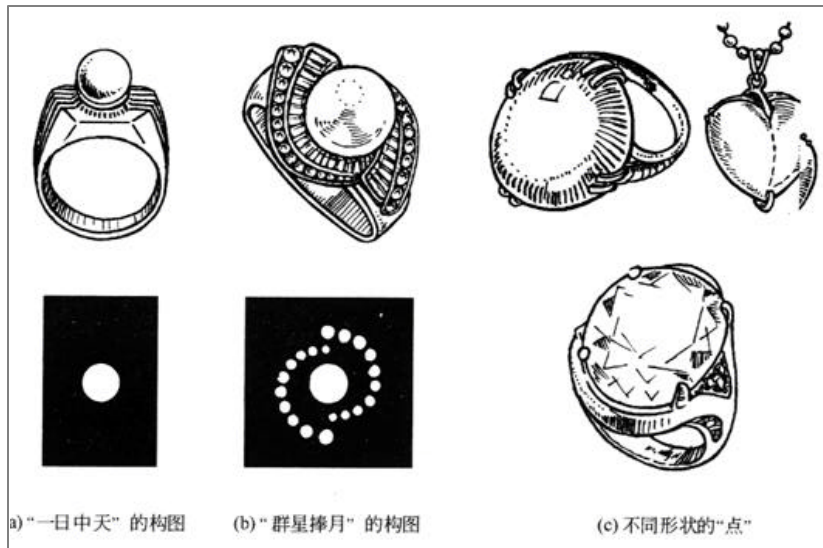


Fig. 12: Point in jewelry design



Fig. 13: Line in jewelry design



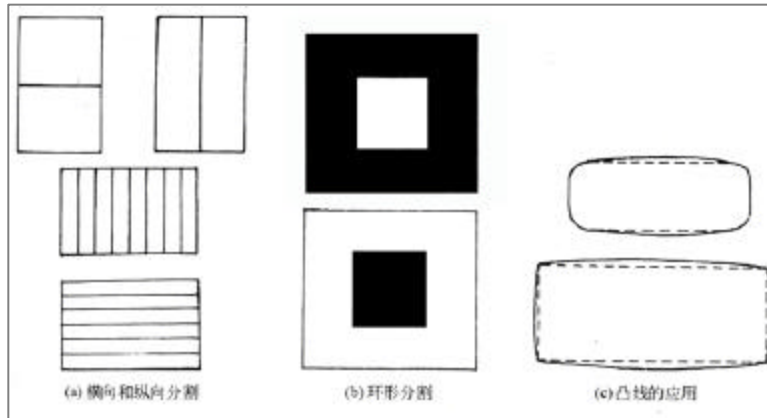


Fig. 14: Division of planes



Fig. 15: Stereoscopic of bead pendant



Fig. 16: Stereoscopic of ring

extension, substance and light. Through bending, folding and some other ways, it develops into solid. Because the whole size of jewelry is limited, there should not be too many planes in jewelry; otherwise it will show complexity and disorder.

The division, folding and rotation between planes can make new planes as shown in Fig. 14. Types of division: (1) Different widths of planes, (2) Different area of planes, (3) Inclined plane, (4) Divided by diagonal.

In jewelry design, the flatness of plane, the shape of edge, the ratio of planes, the change of texture, the set of color, the method of decoration should be taken into consideration. In this way, various effects will turn up in the design.

**Body and block in jewelry design:** Body, itself, shows a certain piece of space. Observed from different directions, it presents different visually shapes. It is the main image of the jewelry and it is made from point, line and plane. For example, gems are inlaid in the front and side of the jewelry in order to add to the beauty of 3D decoration. In jewelry design, the concept of “body” should be put at the first place. Designers should set up the concept of 3D and develop the ability to distinguish the image as shown in Fig. 15 and 16.

In every process of expanding the point into plane, moving the point and line to make the plane, or using planes to make the body, the change of forms is throughout the whole process. In actual design, the force of form is the main factor that affects basic movement. Designers manage to complete the design through using the combination of point, line and planes.

**CREATIVE DESIGN BASED ON MATERIAL, COLOR, TEXTURE AND THE PROCESSING CRAFT**

Form design is an actual operation on real materials, so both concept element and visual element should depend on concrete materials which is related to the features of materials. Thorough exploration to form design cannot be apart from material, color, texture and processing craft.

**Creative design based on material:** Now-a-days there is no longer any material that is prohibited in jewelry design. Anything that can improve the quality and value of design and can be used in a proper way is good material which can be easily proved in the development of some cheap materials like paper, silk strips and tin. Of course, traditional and expensive metals like silver and gold are still the most suitable materials in jewelry.

Jewelry with different materials has different features and gives people various touch and spiritual feelings. The features of materials mainly reflect on its color, texture and other special effects, including smooth and rough, hard and soft, light and heavy, hot and cold, etc. For instance, metal has exquisite shine; diamond has brilliant shine; jade touches soft like water; crystal is insightfully bright. As shown in Fig. 17, the match of jade and diamond has its unique effect and beauty. In this pure jade-match-diamond ring, the texture of jade stands out by contrast of the gem and it shows noble and elegant.

**Creative design based on color:** Color and shine are both treasured tricks that appeals to consumers. Colors can indicate characters and the style of jewelry. The color of

the gem itself is the most important factor in jewelry design. For consumers of different races, areas, ages and levels, colors should differ according to consumers. In particular, in fashion jewelry design, the breakthrough and the combination of colors make the jewelry more gorgeous and at the same time produce colorful forms.

As shown in Fig. 18, the jewelry is made by palladium and a kind of material called Enamel. It has the art of colored drawing and combines beautiful colors with its texture and luster which are just like gems. It has a strong visual impact as well as an artistic aesthetic feeling.

**Creative form design based on texture:** Different texture of different materials can make a different visual feeling on the person, for example, porcelain is smooth and delicate;



Fig. 17: Mmatch of materials



Fig. 18: Jewelry boldly designed with color





Fig. 19: Jewelry designed by joining different texture together that formed a new texture



Fig. 20: Jewelry designed by creating new texture

fabric is soft and comfortable; glass is bright and clean; stone is hard; plain wood is warmth; metal is cold and leathery; diamond is clean and hard; pearl is soft and moist and so on.

The combination of the same or similar skin texture with the contrastive different textures from the wide range of materials, can give full play to the characteristics and functions of different materials in jewelry which creates a unique aesthetic form. With a lot of accesses to make a



Fig. 21: Jewelry designed by special process of imitation e enamel

feeling of visual texture, joining different materials together is one of the most effective means. Anything similar pasted on a surface can form a new state of the regular ups and downs which form some effect of skin texture and texture in order can produce an aesthetic feeling. As shown in Fig. 19, the bracelet is designed by such method and at the same time, a variety of contrastive textures can be found in this design.

Another one of the main way to create new skin texture is to transform texture which means reconstruct material in a variety of ways based on the different characteristics of the material itself, such as wrinkling, acupuncture, penetrating holes, cutting, or other methods, to make its original texture form changed, causing a new pattern of ups and downs. As shown in Fig. 20, the personal jewelry is designed, using three dimensional model programs by Jessica and Jesse who graduated from the Massachusetts Institute of Technology. The interactive and open network is mainly used in this personal jewelry.

#### **Creative form design based on the processing technology:**

The success of the form design of jewelry is also depends on the effective and reasonable control of processing technology, such as electroplating, sand blasting, acid etching and electroforming and those ways are also necessary to complete the form. In traditional craft of jewelry, there are many special processing, such as filaments mosaic, cloisonne, porphyry copper process to complete the jewelry. Use of traditional processing and production methods can completely show the beauty of the jewelry form. The bright translucent enamel jewelry in Fig. 21 is shaped by wrapping copper wire and silver wire around with the special process of imitation enamel which appears to be very delicate and exquisite.



Fig. 22: Works of Japanese jewelry design master PingSong Baocheng



Fig. 23: Design has a meaning of the bride of the droplets

There is also a trend of “de-industrialization” appeared in modern jewelry process which means the

jewelry is made manually and unable to replicate. Today, the general process in “de-industrialization” jewelry is forging, texturing, carving, stamping, engraving and so on. Like a special method to form fold texture on metal surface—burn knit, burn the metal surface with welding torch into undulating skin texture. Since when the one side of the metal is heated to melt, the other side began to grow soft because of the heat conduction and at this moment if we cool the metal down, the soften side will draw back toward the center, the molten side will cooled more slowly than the other side (the two sides can not be synchronized), so the fold texture appears.

As shown in Fig. 22, it is the classical work by Japanese jewelry design master PingSong baocheng. It shows a kind of casual texture, giving soft optical illusion to hard metal. Also, this jewelry show a wonderful dynamic visual perception.

**Creative form ddesign focused on culture:** A lot of jewelry has got rid of its inherent practical value but pays more attention to embody a certain culture. The design focusing on culture often appears in the notional design of jewelry. The most distinguishing features of contemporary jewelry are creativity and design which make the jewelry unique. Designers add more personal cultural ideas into their works, the purpose of design is no longer a simple adornment effect and the form factor is less important than before. However, the ideas play a leading role in design. The designer tries to convey some ideas by jewelry works, so more and more experimental and conceptual works embody (as shown in Fig. 23).



Fig. 24: Jewelry design shows environmental friendly spirit

Thai designer Noon designed the brooch into different sizes of buttons, due to the use of the automobile coatings and perfect post-processing technology. This series of works is filled with industrial color. While a Chinese designer living in France designed a ring like a tree stump, this design called “the root” expressed the deep miss from a traveler to his own culture and homeland. When the designers design a notional jewelry, they intend to get rid of the traditional stylist but give the works a certain meaning, inspiration and reflection to the person, make jewelry as a part of spiritual life for every individual, embodies the “originality” of

design. The design in Fig. 24 shows environmental friendly spirit.

### **SUMMARY**

Along with the social development and progress, material abundance, further refinement of consumption level, human demands for the mental function of jewelry are constantly improved. The process of purchasing and wearing jewelry is actually the interpretation process of jewelry. By the interpretation of semantic formal symbols, consumers can uncover the connotation hiding behind the surface, so as to get the satisfaction of material and spiritual and finish the accumulation from the surface of practical function to the deep culture.

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