



Applications of Metaphors in Jewelry Design

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Abstract. According to Michael Porter's concept of building a competitive advantage on culture, what Taiwan lacks in its current economic development is a social value that encourages creativity and innovation, that is, a "economic culture" that supports an aesthetic economy. In the contemporary development of jewelry design, the role of jewelry design is directly or indirectly interpreted by the forms of jewelry. Jewelry is one of the best means to define characteristics, signify status, and deliver thoughts and culture. Jewelry gives consumers a sense of identity and carries ideas of a thinking design. Based on Chinese literature criticism, this study attempts to apply a specific model presented in the "Bi Xing" chapter of Liu Xie's *Wen-Xing-Diao-Long* to develop a metaphorical design model. Through case study of jewelry works, this study explores use of metaphors in each work and discusses use of metaphors in a literary framework. In addition to investigating the forms and meanings of metaphors, this study also extends the jewelry design thinking model and conducts a quantitative evaluation of the proposed model. The results can not only offer guidance to metalworking instructions but also promote awakening of the aesthetic awareness in our culture, deepening of the power of jewelry design in our society, cross-domain cultural exchanges, and creation of a consciousness that speaks for the contemporary or the future society.

Keywords: Jewelry design · Thinking design · Metaphor design model

1 Introduction

1.1 Background and Motivation

In the researcher's observation of classroom instructions of metalworking, techniques are always the focus, and how to integrate creativity in metalworking is seldom addressed. Students often ask the instructor with a confused look "Sir, how should I convert my ideas into creative vocabulary?". The researcher deeply believes that in addition to the thinking design curriculum, how to read art works, how to interpret artists' thoughts and creative styles, and how to analyze the connections between design ideas and jewelry works in a theoretical framework of metaphors should all be incorporated into the current metalworking education.

In contemporary jewelry design, using various forms and techniques to deliver the creator's thoughts has become an increasingly dominant approach. The value of a

jewelry design needs to be interpreted through in-depth observation from multiple perspectives. This study will analyze applications of metaphors in contemporary jewelry designs using the case study approach. The spiritual meanings, conversion of symbols, cultural value, and perspective reflections in the selected jewelry works will be explored. This study is intended to awaken the pursuit of aesthetic awareness in people, promote the application of metaphors in the thinking and creation of art works, and encourage more rational analyses of the associations between object, affect, and words. The ultimate goal is to create a consciousness that is particular to the contemporary or the future society through deepening of the influence of design, improvement of aesthetic knowledge, and promotion of the cultural and creative industry.

1.2 Objectives

In addition to formulating a design thinking process through analysis of applications of metaphors in jewelry designs, this study aims to achieve the following goals:

- (a) Explore the Eastern and Western theoretical frameworks of metaphors;
- (b) Construct the contemporary jewelry design model and conduct a case analysis.
- (c) Examine whether the traditional literary criticism theory supports the analysis result to verify the feasibility of the theory.

1.3 Scope and Limitation

In this study, the subjects are students and experts in the art, design, and metalworking areas. From these subjects, this study will explore the importance of the structure of design process in the learning and cognition of metalworking knowledge. Besides, through a review of related theories and data, this study will investigate the applications of metaphors in design and further discuss the approach and thinking process of using metaphors in literature and poetry as described in the “Bi Xing” chapter of *Wen-Xing-Diao-Long*.

2 Literature Review

2.1 Metaphor as a Means of Interpreting Designs

In Chinese literature, Liu Xie’s *Wen-Xing-Diao-Long* is a critical and theoretical work that offers a method of devising metaphors. Compared to contemporary design methodologies, this work provides a fairly specific operational model, and this model is also commonly used in design. In the “Bi Xing” chapter, Liu Xie states “metaphors can be applied to various kinds of subjects, including a sound, an appearance, feelings or an event” [7]. “Bi” is the method of describing one thing by comparing it to another thing with similar features. There is no particular rule of using it. It can be used to describe anything from a sound to an appearance, feelings or an event. “Xing” is to devise metaphors. Metaphors promote extended thinking, leading people to consider the deeper meaning or the value of the subject being described. To devise a metaphor, one has to

be discerning and describe the subject in an intuitive and implicit manner. In terms of format, the subject and the object of the metaphor are both equal and opposite in certain aspects. Herbert Read explains Aristotle's definition of metaphor as follows: "metaphor is the swift illumination of an equivalence. Two images, or an idea and an image, stand equal and opposite; clash together and respond significantly, surprising the reader with a sudden light" [11]. Chou [1] states in the Chinese translation of *Metaphors We Live By* (by Lakoff and Johnson) that metaphor is a thinking model, and from the perspective of cognition, it is not just a rhetoric device. It is a thinking model where we comprehend a concept based on cognitive experience of another. In the cognition of a metaphor, we identify similarities between two concepts and then transfer one's image to another. This process also establishes the significance of cognitive linguistics research. In literature, metaphors are linguistic decorations. Reducing use of metaphors in our daily lives will probably make no significant difference. However, it cannot be denied that metaphors force people to think and infer a deeper and extended meaning of the subject described.

In the creation of art, artists create a work intuitively based on an impression of the senses or through imagination, to subjectively express a perspective. This process applies not only to art but also to literature. Literature, especially the form of poetry, is created to convey human feelings too. According to Francis Bacon, poetry is mainly based on imagination, and imagination is free and not bound by any principle. Through imagination, what is naturally divided can be combined, and what is naturally integrated can be divided [12]. Richard mentions in *The Philosophy of Rhetoric* that it is recognized in the contemporary research of metaphors that there is a reciprocal relationship between the tenor (subject) and the vehicle (object) of a metaphor. Essentially, through language, text induces philosophical discussion, where the perception of one thing is transferred to another in the comprehension of a metaphor. Lin and Yeh [8] mention that when designing conversion of signs, one has to consider the original meaning of the subject and, more importantly, get hold of the extended meaning of the vehicle. As to the application of rhetoric in creative design of cultural products, they also propose a metaphorical design model as show in Fig. 1.

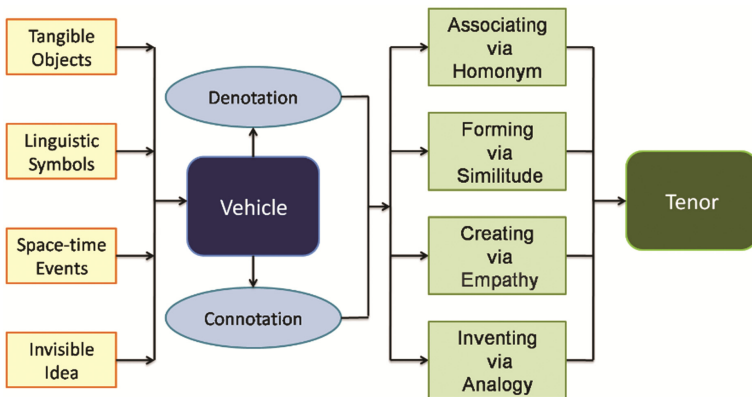


Fig. 1. The metaphorical design model for cultural products ([8], p. 447)

2.2 When Jewelry Becomes a New Concept

In a broad sense, jewelry refers to any decorative item worn on human body. Since the ancient times, people have used various ways to wear or attach decorative items, including animal bones, iron, gold, stone, flowers, tree leaves, and other natural materials on the body or clothes. These decorative items are pleasing to the eye. Moreover, because of rarity or uniqueness, these items have gradually become a signifier of value and social status. For example, the use of precious metals, such as gold and gemstones, in Egypt can be dated back to 3000 BC. Precious metals were used to make exclusive decorative items for pharaoh and funeral goods for aristocrats. Application of gold and gemstones in jewelry making was also prevalent in ancient China too. At that time, jewelry was also considered a symbol of status and power.

In the 1970s, there was a trend of reflecting on art creations among artists in Europe. Jewelry designers were no exception. They began to contemplate beyond common conceptions of jewelry, doubt the decorative meaning of jewelry, and discuss jewelry wearing issues from broader perspectives. Viewing jewelry as a means of social communication, they applied different forms, compositions, material vocabularies or wearing styles to convert an intangible disposition into a three-dimensional jewelry work. Neither aesthetics nor jewelry value was their primary consideration in the creation of a jewelry work. During the 1970s and 1980s, many bold and innovative jewelry works were created because most designers were very skillful. Although these designers sought to create a design beyond the face value and focused on discussion and visualization of the mind, most jewelry works were created in an illustrative or abstract form or in an experimental manner in pursuit of a breakthrough in jewelry design.

In contemporary jewelry design, jewelry artists play a special role. They integrate individual experience, status consideration, background of the times, and perceptions about life into their designs. As a result, most contemporary jewelry works carry multiple meanings for wearers to define themselves.

3 Research Method

3.1 The Metaphorical Design Model

This study is based on a model adapted from the metaphorical design model for cultural products (Fig. 1) (Lin and Yeh [8]). The main difference between the modified model and original model lies in the integration with the theory presented in the Bi Xing chapter of *Wen-Xing-Diao-Long*. This theory suggests that we rely on images to explain a feeling or make analogies. This study attempts to find a new thinking model as show in Fig. 2 hope can make the design process that can offer a direction for jewelry designers. Based on the vertical thinking that occurs in the creation of four themes, this study classifies the design subjects into two groups, namely tangible and abstract. For subjects in the tangible group, the focus is placed on observation and description “tangible objects” and “time events”. For subjects in the abstract group, the goal is to give meanings to “communicative signs” or “invisible concepts”. For jewelry designers, there are a variety of subjects to choose from in each group. They can apply a different form or technique

to express a perception or opinion. Metaphors are prevalent and exist in various forms. Designers need to determine the material and form for their work first and then create the implicit meaning of the design that can induce spiritual interactions with viewers. The use of metaphors in depicting an appearance, an event, a sound or feelings will trigger association in viewers’ mind and add beauty to the design.

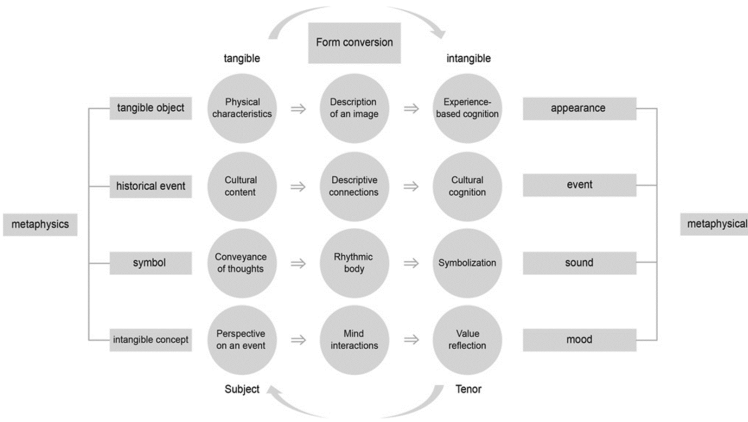


Fig. 2. The metaphorical model for jewelry design (Revised from [8])

3.2 Case Analysis and Questionnaire Survey

In order to develop a metaphorical model for jewelry design, this study adopts a qualitative approach. Based on literature, this study develops a two-axis model as shown in Fig. 3. One axis denotes the “development of a metaphorical model”, and the other shows the “development of a jewelry design model”. The former is also the main framework of this research. The latter is intended to support the development of this framework. In this study, case analysis will also be conducted to analyze the background, thinking, and the metaphorical method of each selected work. To determine the form, genre, and meaning of each work, this study further conducts a questionnaire survey. The survey provides data for analysis of the differences between viewers’ perceptions and the classification of the proposed model. Finally, this study also conducts a multidimensional scaling (MDS) factor analysis and style analysis to evaluate the feasibility of the proposed model.

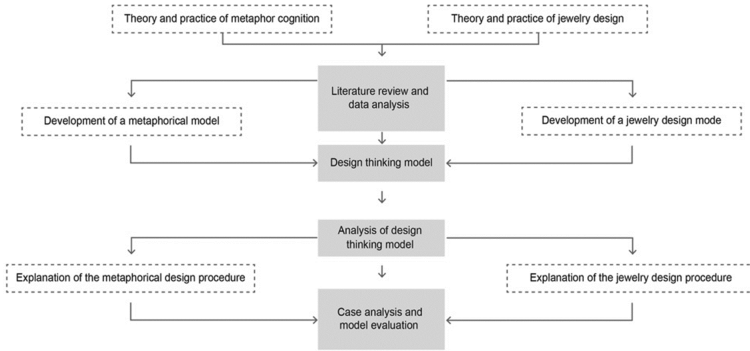


Fig. 3. The research framework of design applications of metaphors

3.3 Subjects

Based on the above-mentioned four themes, including “tangible objects”, “time events”, “communicative signs”, and “abstract concepts”, this study selects eight works for case study. These works are respectively designed by Dutch artists Felieke van der Leest and Lucy Sarneel, German artists Franze Bette and Otto Kunzli, Slovakia artist Jana Machatova, French artist Nathalie Perret, Spanish artist Ramon Puig Cuyàs, and the researcher I-Ting Wang. Survey participants were mainly recruited from sophomore and junior-year college students studying arts, design or metalworking. Before the survey, these students were introduced to the artists’ works and experiences during classroom instructions. In addition to these students, participants of the survey also include experts in art.

4 Case Analysis of Applications of Metaphors in Jewelry Design

Jewelry is pleasing to the eye. When worn as a decorative item, it signifies status and reflects the identity of the wearer; it also induces deeper thoughts on the materials used, value, as well as the relationship between the culture and the body. The focus of discussions about jewelry has transcended its face value or functions to cover art, technology, aesthetics, design, sociology, politics, economics, environment, and humanity. In the researcher’s observation of creative thinking among contemporary jewelry designers, there are three creative styles of jewelry designs, including “expression of personal feelings”, “representation of craftsmanship”, and “depiction of a social phenomenon”. Starting from the top of the central axis, one can express an inspiration from nature or a personal feeling and then take the left path to revisit or seek a breakthrough in craftsmanship or take the right one to reflect on the humanistic value in a social phenomenon. As shown in Fig. 4, this is roughly the model of contemporary jewelry design. In this study, eight jewelry designs that conform to this model are selected. In addition to creative thinking which is presented along the vertical axis, this study will also discuss the

structure, representation, and meaning of metaphors used in jewelry design. The category of messages carried by the metaphor, the similarities, and differences between these designs will all be analyzed from the perspective of a viewer and a designer.

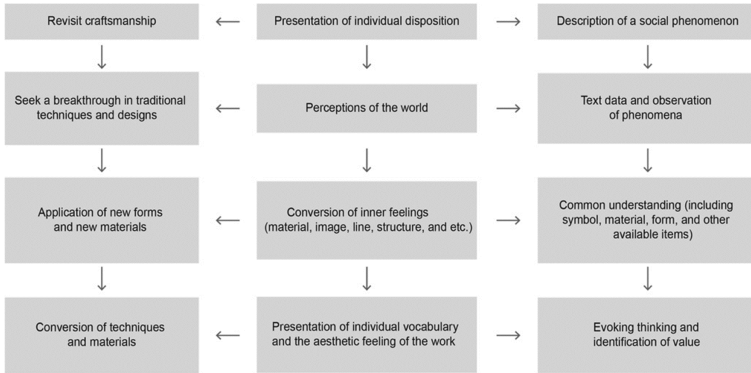


Fig. 4. The rough model of contemporary jewelry design

4.1 Case Analysis

Case 1: Anti-war Warrior

Dutch artist Felieke van de Leest is good at using knitting, crotch, and beading techniques in jewelry design. In the choice of materials, he uses the image of a terrier dog to represent a warrior. At the center of visual attention to this work, the dog holds in its hand a broken arrow as an anti-war symbol. The target at which the arrow is aimed consists of numerous colors, which conform to the colors used in the rainbow flag of gay rights. Due to limited space, the missing purple color in the target is used on the hair of the dog. This anti-war warrior is also intended to highlight the controversy over an anti-homosexual regulation passed by Russia in Jun 2013 ahead of the 2013 Sochi Olympic Games. This artist cleverly uses an animal model to initiate more public discussions about the issue. This unique, interesting and humorous work shows the designer’s concern about environmental, sociological and social issues. It evokes people’s reflection on problems in the realistic world as well as the lifestyle of modern people (Fig. 5).

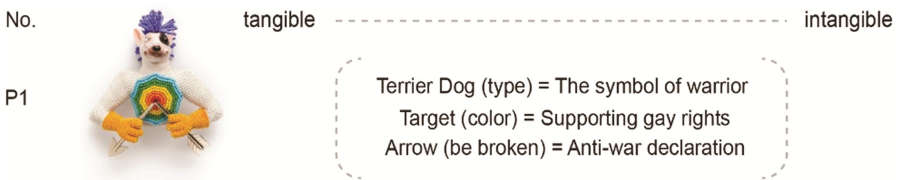


Fig. 5. The metaphorical structure of Anti-war Warrior [4]

Case 2: Flower Power

Dutch artist Lucy Sarneel creates works to highlight the disappearing traditions and culture in the Netherlands. This work is a medal-style pendant. Its surface material is texture containing traditional Dutch symbols. From the perspective of historical significance, it represents an article that mothers pass on to their daughters, from generation to generation. For the designer, jewelry signifies individual territory and characteristics and also defines the perceptions of its wearer. This designer is devoted to searching for subject matters that need attention in Dutch culture and history. This work is named Flower Power. It also has an anti-war implication. The designer advocates peaceful resistance to war. Hippies are believers of symbolism. They wear embroidered and colorful clothes and attach flowers to their head. This tradition has become a way of expressing opinions in the hippie movement. Created with the designer’s attention to traditions and spirituality, this design shows that jewelry has the function of highlighting cultural phenomena and conveying spiritual meanings (Fig. 6).

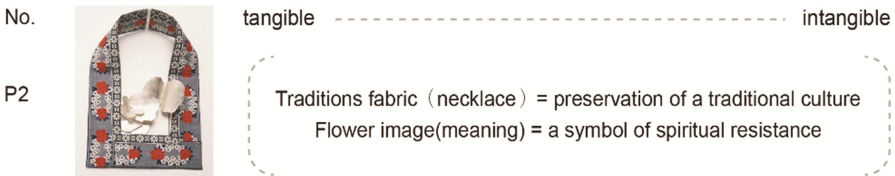


Fig. 6. The metaphorical structure of Flower Power [6]

Case 3: Connection Series

Spanish artist Ramon Puig Cuyàs uses symbolic elements as the basic components of this design. Through intuitive dialogues with materials, he tries to use abstract signs to express human perceptions and opposite/parallel alignments of signs to interpret the operation of the universe. Like the beats in a rhythm, the points, lines, planes, and body in his works are delicately aligned to create a harmonious or contracting relation. The tempo and music come from a natural and simple metaphor (Fig. 7).

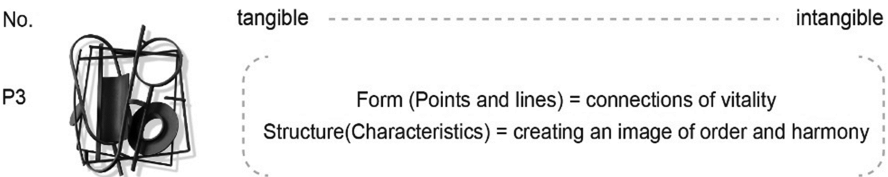


Fig. 7. The metaphorical structure of Connection Series [10]

Case 4: Necklace Form

The work of French artist Nathalie Perret is heavily influenced by the Latino American culture of mourning, rituals, and ancient codes. Her research focuses on the link between birth and death. In creating this necklace work, she uses plaster to represent death. The plaster necklace will leave a mark on anyone who wears it. It reminds that we are all

made of time and will leave a memorable mark but also a fleeting memory of our own death. Designers' material choice is usually associated with the symbolic meaning of the material. This work is intended to stimulate reflections on ways of dying. Using plaster as a symbol of death and performance art as a presentation style, she tries to express the fleeting symbolic meaning and the load of death (Fig. 8).

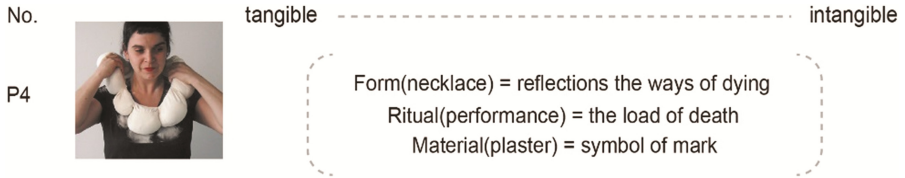


Fig. 8. The metaphorical structure of Necklace Form [9]

Case 5: Bloom Series

Taiwanese artist I-Ting Wang often uses “colors” as a medium to express emotions and also as a means of communication. In this work, she uses aluminum as the material. As an industrial material, aluminum is seldom used to show craftsmanship. This choice of material therefore denotes a revisit to metalworking techniques. In this work, the subject is a butterfly hidden in the flowers. This design creates a double contrast for discussion about the fading of life. When the butterfly dies, the beauty of its appearance remains; when the flowers wither, they dry up and lose color. The appearance of the butterfly implies that the spiritual existence of the butterfly is hidden in the flower body, whereas the status of the flowers implies that the symbolic existence of the flowers remains in the flower body. This suggests that the will to live in every living thing will eventually diminish and there will always be new lives. The aluminum material is colored through anodic treatment to represent the flower color that never fades and its blooming state (Fig. 9).

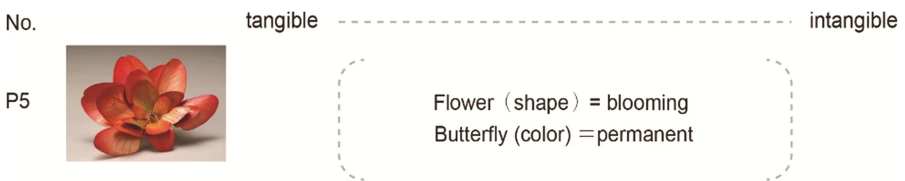


Fig. 9. The metaphorical structure of Bloom Series (I ting Wang 2004)

Case 6: Love for the Brotherhood

Jana Machatova from Slovakia creates her works based on memories. She describes the political system and social phenomena she went through when she was young. She expresses her political perspective in her works. Based on the well-known historical event about the strategic cooperation between former Soviet Union and East Germany, she has also developed a series of works that touch upon political issues (Fig. 10).

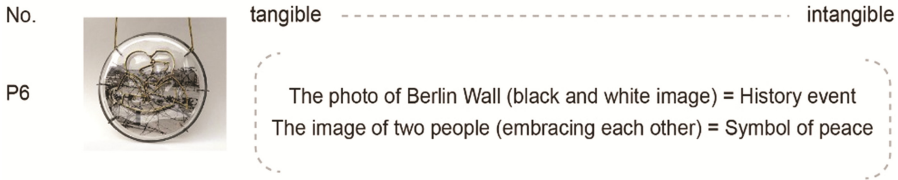


Fig. 10. The metaphorical structure of Love for the Brotherhood [5]

Case 7: Poetic Space

German artist Franz Bette has been inspired by an early fascination for materials. Jewelry making has been a part of his life for half a century. The meaning that jewelry makers give to materials is above and beyond their market value. His application of non-precious metals, including stainless steel and iron, requires more sophisticated craftsmanship. The design is simple. It consists of numerous units that are rhythmically aligned in the space. In his design, lines and circles are design words. Using combinations of basic elements, he tries to express inner feelings and personal observations of life. The feeling of action added to the structure manifests the difference of jewelry from other art forms. Through the wearing behavior, wearers have a dynamic relation with the hand and the body, which can also be considered a dialogue between the material and the mind (Fig. 11).

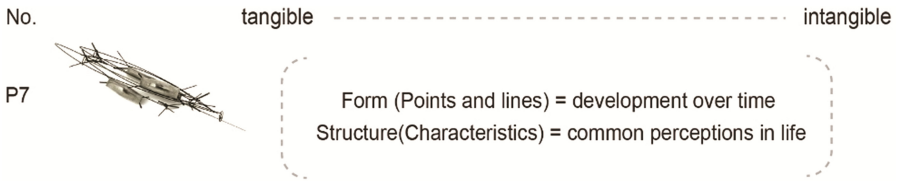


Fig. 11. The metaphorical structure of Poetic Space [3]

Case 8: Wallpaper Series

German artist Otto Kunzli is considered one of the most critical makers in jewelry design. In his works, he expresses personal reflections and doubts about values using minimalistic symbols. He is good at using metaphors and images to convey ideas and challenge viewers. This selected work uses wallpaper, a decorative element in the house, to ironically highlight the gap between the rich and the poor. The work is intended to depict a society where only households with a higher social rank are able to decorate their house with wallpaper. Wallpaper is converted into a piece of jewelry to symbolize wealth. The wearing style of the jewelry is designed based on the clothing characteristics of anti-establishment punk. Punk originally refers to a musical style characterized by dissatisfaction with social classes and the social system. Punk is in the class opposite to the wealthy class. The decorative elements they use are undoubtedly the focus of artists' attention. Using materials to create a sarcastic metaphor is one of the best ways of making analogies (Fig. 12).

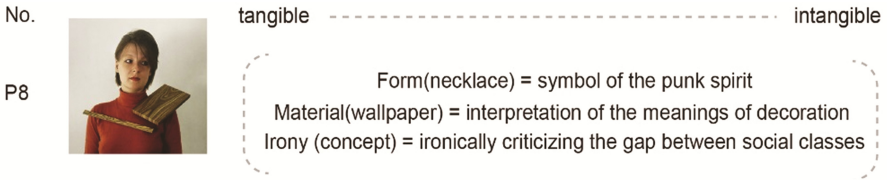


Fig. 12. The metaphorical structure of Wallpaper Series [2]

4.2 Verification of Attributes

4.2.1 Descriptive Statistics of the Participants

According to the research objective, this study recruited survey participants from four areas, including metalworking, design, art, and others. The questionnaire was administered online. A total of 83 valid responses were collected. The sample comprised 19 males and 64 females. In this sample, 60 participants are aged below 25, 16 between 26–35, 4 between 35–45, and 3 above 45; 48 participants have an academic background in metalworking, 18 have an academic background in design, 16 have an academic background in arts, and 1 has an academic background in other areas. Participants aged below 25 were given a brief introduction of each artist’s background and works before the formal survey. This procedure was intended to understand whether students were able to comprehend or appreciate the meanings underlying each work and to validate the proposed theoretical framework.

4.2.2 Analysis of the Theme Attribute

To explore the thinking and meanings behind what is perceived in each work, the participants were asked to evaluate each work’s theme based on the four categories of analogies stated in the Bi Xing chapter of *Wen-Xing-Diao-Long*. As shown Fig. 13, P1 is most conforming to the category of depicting symbolic meanings, followed by P6 and P5. As shown in Fig. 14, P6 ranks top in the category of expressing an event-based theme, and P2 ranks second. As shown in Fig. 15, P3 is rated as most qualified for a work using semiotic expressions and is followed by P7. As shown in Fig. 16, in terms of clear expression of a concept, P1 wins the most votes, and P8 and P6 take second and third respectively.

Work No.	P1	P6	P5	P2	P4	P8	P3	P7
Research Object								
Votes	57	45	44	31	19	17	12	7

Fig. 13. The order of jewelry designs by describing a subject matter









Work No.	P6	P2	P4	P8	P1	P7	P5	P3
Research Object								
Votes	46	37	19	19	17	15	14	8

Fig. 14. The order of jewelry designs by having an emotional connection with a past event

Work No.	P3	P7	P1	P5	P4	P8	P6	P2
Research Object								
Votes	51	40	15	7	6	6	5	4

Fig. 15. The order of jewelry designs by carrying a sound message

Work No.	P1	P8	P6	P2	P4	P5	P3	P7
Research Object								
Votes	57	42	41	38	28	9	6	2

Fig. 16. The order of jewelry design by evoking reflection or a sympathetic response to an issue

4.2.3 Analysis of the Style Attribute

Based on the proposed model, this study identifies four design styles, including “tangible and physical articles”, “time events”, “communicative signs”, and “abstract concepts” and then determines the category of each work. The multidimensional scaling analysis (MDS) shows that stress is .135, which is smaller than 2, and R squared correlation (RSQ) is .929, which is close to 1, suggesting a high level of consistency between the data and the model. The relationship among the eight works and three major themes is plotted on a two-dimensional figure as shown in Fig. 17. Through factor analysis, these eight works can be further classified into three groups, as shown in Table 1. The MDS figure shows that P4, P8, P3, and P7 have a simple form and use the most concrete approach of expression conversion; P2 and P5 are created following strict rules of form and with a characteristic symbol; P6 and P1 have an easy-to-identify form and are intended to describe an event. These works are basically intended to stimulate our visual and hearing perceptions. From their classification results and statistics, two findings can be obtained. The former is to convey an idea or perspective through the image of an event or object as the works plotted on the right side of the graph; the latter is to recreate a mental image for an event or object as the works plotted on the left side of the graph. Both are the ways that creative content resides in a jewelry work.

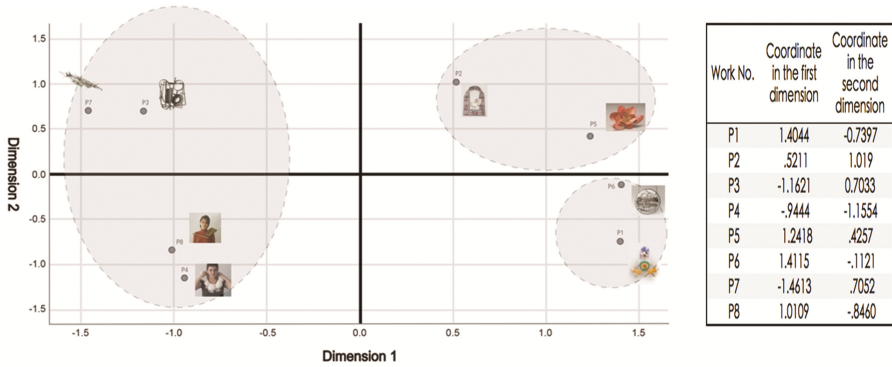


Fig. 17. Distribution of the style attributes of jewelry works

Table 1. The distance of the point on which the attribute vector is plotted from the base point

Style attribute	Adjective of the style	P1	P2	P3	P4	P5	P6	P7	P8
F1 FORM	Interesting-Strict	0.31	1.12	-0.18	-1.49	1.11	0.80	-0.37	-1.29
F2 Meaning	Abstract-Tangible	1.50	0.35	-1.26	-0.75	1.16	1.41	-1.55	-0.86
F3 Naming	Clear-Obscure	1.57	0.14	-1.33	-0.49	1.02	1.36	-1.62	-0.65
F4 Material	Novel-Traditional	-0.33	1.12	0.36	-1.37	0.75	0.28	0.28	-1.09
F5 Appearance	Complicated-Simple	0.51	1.08	-0.36	-1.48	1.19	0.95	-1.58	-1.32
F6 Expression	Straightforward-Converted	1.55	0.24	-1.31	-0.61	1.09	1.39	-1.59	-0.76
F7 Senses	Visual-Hearing	1.58	-0.08	-1.36	-0.21	0.84	1.27	-1.62	-0.43
F8 Approach	Static-Dynamic	0.73	1.01	-0.55	-1.43	1.26	1.10	-0.80	-1.31

4.2.4 Analysis of the Form Attributes

The form attributes of these works are further analyzed. In the MDS analysis, opposite adjectives are employed, and each score on a five-point scale is converted into an angle relative to the axis. Therefore, a three-dimensional spatial graph can be obtained as shown in Fig. 18. The attributes analysis is shown in Table 2. Among works whose attributes conform to the expected classification of this study, “P7 Poetic Space” and “P4 Necklace Form” are two leading works. P7 is intended to stimulate hearing perceptions. Its designer creates a unique semiotic system to make the design a record of an event and also a carrier of a metaphor. P4 has a strong visual appeal and conveys a message through performance art.

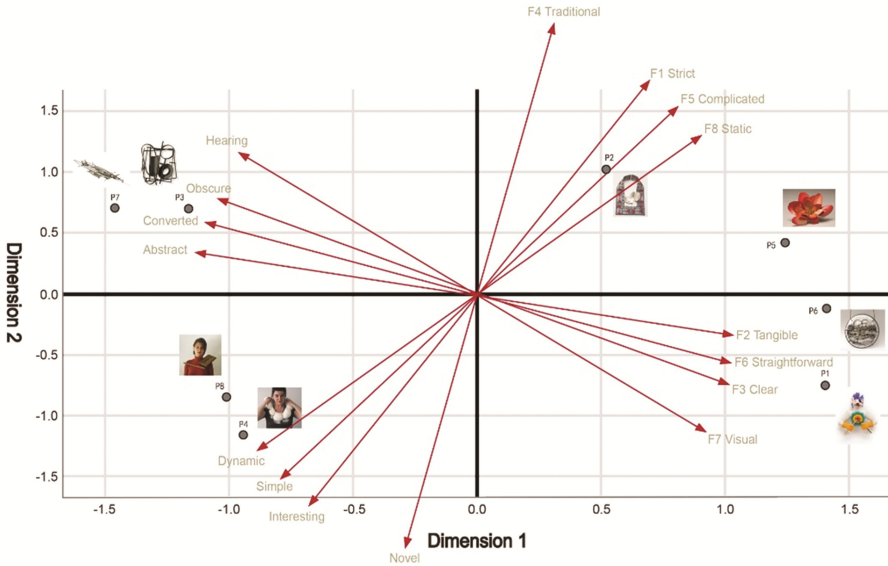


Fig. 18. Multidimensional distribution of the form attributes

Table 2. Factor analysis and attributes of work forms

Style attribute	Component			Representative work	Explanation of the meaning of the form
	Component1	Component2	Component3		
F6 Expression	.978	-.149	.087	P7 Poetic Space	F7 > F3 > F6 > F2 Senses > Naming > Expression > Meaning
F3 Naming	.954	-.123	-.026		
F2 Meaning	.796	.349	.479		
F7 Senses	-.941	.175	-.275		
F4 Material	.121	.905	-.255	P4 Necklace Form	F1 > F5 > F8 > F4 Form > Appearance > Approach > Material
F5 Appearance	.370	-.882	.045	P4 Necklace Form	
F8 Approach	.164	-.136	.950		
F1 FORM	-.146	.596	-.740		

In the prediction of the theme attribute, only the ranking of the items in the category of evoking reflection or a sympathetic response to an issue is not the same as expected by the researcher as shown in Fig. 16. The ranking is P1 > P8 > P6 > P2. These works convey a strong message about an event or issue in a humorous manner. Despite cultural differences, these works can visually and perceptually arouse an awareness and create a higher level of resonance among viewers. To a certain extent, they also facilitate cultural exchange. The analysis of the Table 2 attribute shows that P4 has an interesting form and presentation style, which can often attract viewer attention more easily. This explains why there has been a continuous effort in contemporary jewelry design to look for a creative perception-stimulating form that can be used as a communication medium. In terms of form and content, P7 is the most typical among these works. An abstract presentation method is used to evoke perceptions at the spiritual level. Despite the

absence of concrete associations, this work shows the representation of a meaningful text. The organized structure leads viewers to explore the essence of the embedded metaphor and the relationship between elements. The connections between points are not created following any specific formula. This creates questions in viewers' mind, allowing the designer to more specific.

5 Suggestions and Conclusions

Human perception and thinking is multidimensional. This study discusses metaphor as a carrier of thoughts and analyzes use of metaphors in jewelry works created based on personal opinions, an event, nature or certain issues. As in poetry, empathy can also be employed in jewelry making. In jewelry making, imagination is essentially empathy and also one of the fundamentals. However, imagination is a useful instrument that has been increasingly ignored by modern students. Poets use metaphor-loaded descriptions and borrow meanings from another object to visualize a space, a movement or a tranquil state of the subject. Many forms and principles used in poetry can also be applied in jewelry design.

This study attempts to explore the links and correlations between literature and jewelry design. In qualitative and quantitative analyses, this study propose a model, explore the forms, and induce the attributes. Between literature and jewelry design, there are common principles. Through use of metaphors, designers convey their perspective and force viewers to think. In a deeper sense, metaphors allow viewers to be exposed to certain culture, learn history, and reflect on issues. Jewelry reflects the significance of the times and designers' perceptions of life. When worn on the body, it becomes a means of social communication and cross-domain cultural exchange.

It is hoped that the proposed metaphorical design model can be applied in future metalworking instructions. However, there is no absolute definition of the art of jewelry or absolute outcome of any particular design. Depending on designer's personal experience, cognition, and culture, the design result will vary. The debate over aesthetics is the process where the value of aesthetics is created.

References

1. Chou, S.Z.: *Metaphors We Live By* (by Lakoff and Johnson). Linking Publishing, Taipei (2006)
2. Das, B.: Otto Kunzli, p. 216. Arnoldsche, Stuttgart (2013)
3. Franz Bette (2014). (Online image). <http://www.franz-bette.de/eng/schmuck/Raum1/gallery.html>. Accessed 25 Nov 2017
4. Felieke van der Leest (2012). (Online image). <http://www.artterritory.com/print.php?lang=en&id=3586>. Accessed 28 Nov 2017
5. Jana Machatova (2014). (Online image). <http://www.machmach.sk/index.php?/jana/where-are-you-from/>. Accessed 28 Nov 2017
6. Lucy Sarneel (2003). (Online image). <http://artjewelry-forum.org/lucy-sarneel-in-conversation>. Accessed 28 Nov 2017

7. Lu, K.R., Mo, S.J.: *Liu Xie and Wen-Xing-Diao-Long*. Shanghai Guji Publisher, Shanghai (1978)
8. Lin, P.H., Yeh, M.L.: Representing traditional culture—applying Ho Lo culture elements on creative product design. In: *Ho Lo Culture and Taiwanese Culture*, 10th Conference of Ho Lo Culture, pp. 579–588 (2011)
9. Nathalie Perret (2007). (Online image). <http://www.van-deragallery.be/artists/nathalie-perret/indexen.php>. Accessed 10 Dec 2017
10. Ramon Puig Cuyàs (2011). (Online image). <http://puigc-uyas2.blogspot.tw>. Accessed 20 Dec 2017
11. Shen, C.: *Weng-Xing-Diao-Long and Modern Rhetoric*, p. 54. The Liberal Arts Press, Taipei (1992)
12. Zuo, H.L.: *On Poetry*, p. 56. The Commercial Press, Taipei (2003)