

Metaphors For Designing Modern Products with New Meanings from Cultural Art Features: Insights from Thailand

Jiravut Doungin¹, Jong Boonpracha^{1*} & Palang Wongtanasuporn¹,
Patinya Sang Aroon¹, & Supit Seangkong²

¹Bachelor Program in Industrial Design and Packaging,
Suan Sunandha Rajabhat University,
Bangkok, Thailand

²Bachelor Program in Communication Arts, Burapha University,
Chonburi, Thailand

*Email: jong.bo@ssru.ac.th

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Abstract

A metaphor is a valuable tool for creative design. It assists designers in comprehending design concepts by putting them next to things they already know. To generate creative ideas from metaphors, designers have to think creatively.

Based on the metaphor concept, this study proposes a conceptual framework as a graphical representation tool for design strategy to help designers analyze and incorporate appearance, behavior, and meanings from cultural art features into modern products. Translation, transformation, and design activity processes were performed to demonstrate how this conceptual approach of a case study could reach all three cultural levels: physical appearance of the outer level, usability or behavior of the middle level, and new meanings of the inner level embedded into modern products.

Keywords: Metaphor, Cultural product design, Cultural art features, Design activity, New meanings.

Introduction

Metaphors, according to modern theories, are the way our minds are set up (Fan et al., 2017). Metaphors change how we see the world, organize our thoughts, and classify our experiences. These tools are very important, because they not only help with reasoning but also help people think of new ideas. They give the designer the flexibility to think outside the box and encourage the use of innovative ideas in various creative designs. The use of metaphors by designers has been evident in a lot of detail and with many examples. Still, not many studies have been done to prove that metaphors are helpful in design.

Casakin (2016) has discovered that metaphors help define needs and objectives, and find and describe design concepts. Hey & Agogino (2008) have found that metaphors are most helpful in the early stages of the development process, called "conceptual design," when people conceptualize new ideas. In the last stages of a design process, metaphors are more complicated and require more skill. In addition to skills and knowledge, the design process also needs creativity. Casakin & Kreitler (2005) shows that creative thinking makes it possible to see a

design from new and unexpected viewpoints. Designers utilize distinct kinds of rules, tools, and heuristic-based approaches, like metaphors, to help them be more creative.

Even though it is important, there have not been many studies about how metaphors innovatively transform cultural art features into modern product design to satisfy individuals who have given much thought to the designs of cultural products (Irwin, 2015; Moalosi et al., 2008). Furthermore, design products that show cultural features which are unique to a region can meet the cultural needs of users (Chai et al., 2015, 2018). On the other hand, modernization and globalization have pushed culturally significant design practices, like traditional crafts, to the edges of society around the world (Twigger Holroyd et al., 2017). Nevertheless, industrialization should not cause a country's culture to change so much that it loses touch with its history and traditions. Here, the idea of local cultural art features has been broadly acknowledged as a documented basis to assess and defend any aspects and items that come from a community's historical perceptions, traditions, and behaviors (Parker & King, 1998).

However, more recent research indicates that items containing features taken from cultural art that have been innovatively transformed have a greater impact on users' cultural reflections (Siu, 2005). In the stages of product design, there is a shortage of any methods that takes into account contemporary lifestyles. There are no studies that would assist designers in generating cultural content beyond its superficial expressions. In response to this question, this study proposes a new conceptual framework for metaphor-to-product design process. As a graphical representation tool for practical application, a metaphor aids designers in interpreting and incorporating the aspects focused on cultural art features into modern product design.

This paper aims to contribute to the possibilities of engaging metaphors for the design modern products with new Meanings from cultural art features. Its intention is to help preserve local cultural identities as Yu & Dong (2019) have articulated. Its objectives are to:

1. To use a metaphorical conceptual interpretation, to conceptualize a product employing metaphors.
2. To propose a cultural product that can inspire users' awareness and understanding of cultural art features lead to culturally sustainable modernity.

Theoretical Framework Metaphor Design

Metaphors help comprehension of an unknown circumstance in terms of a familiar circumstance (Ortony, 1991). Through the use of metaphors, it is feasible to relate to what is readily recognized in order to explain what is unknown. Metaphors are essentially an unexpected combination of the recognizable and the unfamiliar. These stimulate the emergence of novel associations that expand the human potential for interpreting (Lakoff, 1987). Metaphors are therefore regarded as excellent tools for creative design challenges.

Lakoff and Johnson (2013) explain how metaphors help people learn, including how they work and how they are put together. They consider this in terms of the conceptual metaphor theory. This theory has led to many studies that look at how cognitive origins relate to multimodal expressions (Forceville, 2002). People learn and experience new things every day by comparing them, consciously or unconsciously, to what they already know. In the same way, metaphors shape a lot of what we know about culture.

As cultural carriers, design products embody cultural meaning and change how people see things through interaction processes, including using. Siu (1999) has looked at how taking an escalator in Hong Kong shows and explains the culture of the city. Hence, the metaphorical concept could be an excellent idea to create a design artifact easy for people from different cultures to understand and appreciate. Fauconnier and Turner (2008) assert that metaphorical design is a two-sided mapping process that leads to new insights and meanings. When people try to match what they know about the source with what they know about the target, certain aspects of both are found, while others are downplayed. In this way, people come to a better understanding of both. As Hekkert & Cila (2015) suggest, this can result in novel implementations and a more profound level of meaning.

Gentner et al. (2001) say that when it comes to creative design, metaphors are essential for three main steps. The first step is to pull out a number of unfamiliar ideas from distant fields, where possible connections to the design at hand are sometimes not clear. The second step is to make a map of the deep or high-level connections between the metaphorical idea and the design. Abstractions and generalizations are used to find the connections between things. Relationships that are not as important are rolled out, and only structural matches between the source input and the source target are made. In the last step, structural correspondences between the metaphorical source input and the source target at hand are transferred and used. This usually results in an innovative design.

Product design professionals' design projects provide numerous instances demonstrating the usefulness of metaphors in design practice. For example, in Figure 1, below:

- **a:** "Paint or Die but Love Me" is a metaphorical table that is spilling paint all over the floor! This table was masterfully designed by French art director and product designer John Nouanesing to represent a flat, rectangular surface that is totally saturated with rich crimson liquid. Since the table is not visible, it appears as though the red liquid has been spilled over an invisible flat surface. Even the table's legs are concealed by the "trickles" (Foisil-Penther & Chamot, 2011).
- **b:** Joris Laarman's Bone Armchair (left), from 2008, and Bone Chair (right), from 2006 are the illustration of metaphor thinking when the product designer was motivated to build a line of furniture by the composition and structural characteristics of bone tissue. By employing a biomimetic method, the procedure is modeled after the effective manner that bones develop, adding material where strength is required and removing material where it is not (Rodgers & Milton, 2011).
- **c:** AJORI was inspired by the elegance of the lines that define each piece's form, and the peculiar texture of various cloves of a single garlic bulb. The various design options for a seasoning set in the shape of a garlic bulb provide absolute clarity regarding the object's functionality. In 2013-2014, this design was awarded the GOLDEN A' Design award in the bakeware, tableware, drinkware, and cookware design category (Vinas et al., 2012).

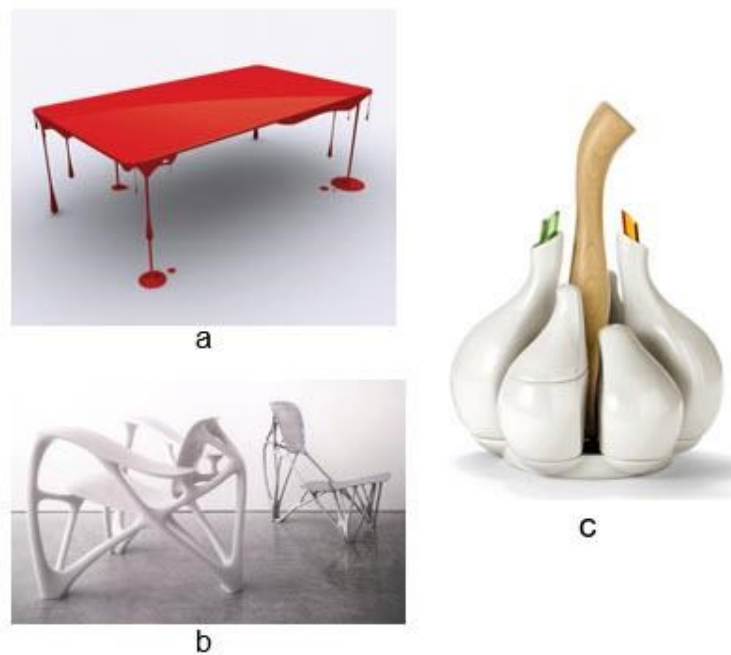


Fig. 1: (a) Paint or Die but Love Me by John Nouanesing, (b) Bone Armchair by Joris Laarman, (c) AJORI by photoAlquimia
Source: Author

In-depth research is necessary in order to gain an understanding of how to metaphorically map cultural art features and modern products through embodied design products. However, cultural art features are rarely considered from the perspective of the metaphorical approach to conceptual design process, despite the fact that they are vital factors in supporting creative and practical design. The study claims that products which metaphorically connect cultural art features with modern lives might encourage people to characterize the cultural significance of cultural art features in a fresh perspective, including sustainable cultural influences. This would be beneficial to culture as a whole. In other words, cultural products are able to meet the necessities of modern life while still preserving the individuality of the local culture (Lin, 2018).

Culture and Design

Hofstede (2001) points out that culture has the ability to exert influence over every aspect of every area of human life. As designers start a new project, the first thing they have to do is figure out what the needs of customers are going to be for that design (Noble & Kumar, 2008). In the process of designing a product, it is critical to keep in mind the "wants and needs" of the target market, as these factors influence the product's specifications. The product requirements are determined by a number of demands of the customer that is being targeted, including but not limited to form, style, materials, performance, durability, application, cost, and so on. According to Marti & Bannon (2009) however, the perspective of the consumer, who will ultimately be the one using the developed product, is put into account when choosing the criteria for a product.

Although product designers are required to consider the "needs and wants" of consumers, they must also consider their own abilities when developing the product. However, Moalosi et al. (2008) show that there are times when it might be challenging for designers to determine the requirements of consumers because the cultures of those consumers are difficult to quantify and are changeable. Despite this, cultural factors can have a considerable impact on the evolution of product design. However, culture is not only relevant to customers; it is also relevant to designers, as the tastes of designers are formed by the cultural and social values of their respective communities (Razzaghi et al., 2009). As a result, it is abundantly clear that product design development and cultural considerations cannot be dissociated.

1. Three Cultural Levels

Lin (2007) has proposed a culture structure as consisting of three layers that reflect products, values, and basic beliefs. These layers can be recognized by their essential design characteristics, which may include characteristics that represent usefulness, aesthetics, or symbols. Leong & Clark (2003) has proposed a paradigm for the study of cultural products that is differentiated by three distinct levels: the outside "tangible" level, the middle "behavioral" level, and the inner "intangible" level. Siu (2005) further provides the outer-middle-inner leveled structure. This approach is consistent with Leong and Clark's three distinct levels. The outer layer, which corresponds to the tangible category, is tied to the material level, and includes things like visual symbols and crafts. The middle layer, which refers to behavioral activities, is meant to make a relationship between the outer surface layer and the interior intellectual layer. The inner layer, which corresponds to the intangible category, serves as the core value and is responsible for stimulating cultural thought and reflection. With the guidance of this outer-middle-inner leveled structure, designers and researchers will have easier time analyzing the leveled correlations that exist between the many elements that are derived from cultural art features. A designer can communicate the culture of each of the three levels by using creative design methods and styles if they have a profound understanding of particular aspects of cultural art features.

Based on the studies of Lin (2007), Leong and Clark (2003), and Siu (2005), this paper proposes a three cultural levels model as graphically summarized in Figure 2. It asserts that culture can be classified into three levels: 1) The outer level that can be visible and touchable, stemming from appearance including form, shape, color, texture, etc. 2) The middle level that

can be visible but non-touchable, stemming from behavior including function, usability, and performance. 3) The inner level that is non-touchable and invisible, and stems from concept, affection, and beliefs.

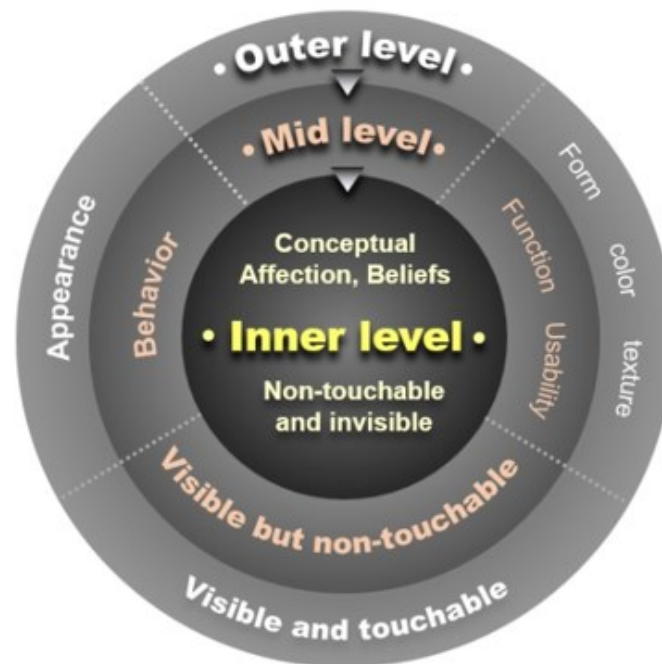


Fig. 2: Three Cultural levels: Outer level, Middle level, and Inner level
Source: Author

Adapting the cultural framework (Siu, 2005) and the theoretical Model of Metaphorical Design (Qin & Ng, 2020), a conceptual framework is presented as shown in the Figure 3 to promote the metaphor product design process. The metaphorical matching allows designers to merge new cultural product meanings by combining modern products with cultural art features. The cultural theories of Siu (2005) and Qin and Ng (2020) are adapted to stress the critical layering of intangible and tangible characteristics between cultural art features and modern products. When a consumer experiences a product, its superficial appearance on the outer level and function on the middle level in behavioral activities, are perceived. These two levels are represented as a visceral act to generate a metaphorical connection (Madsen, 1994). When the source aspects of cultural art features and the target components of modern products are matched, a new cultural product meaning is developed. This idea is based on empirical evidence from Chow et al. (2016) showing that when consumers recognized source and target cultures in new product styles and concepts in a bicultural context, new meanings were blended. Suseno & Nguyen (2021) also explored empirically how consumers integrate new meanings when comprehending the source and target of digital marketing. With the design activity as an assisting tool for generating a creative product, metaphors are understood, and new meanings emerge through the construction of mental imagery (Chang & Wang, 2020).

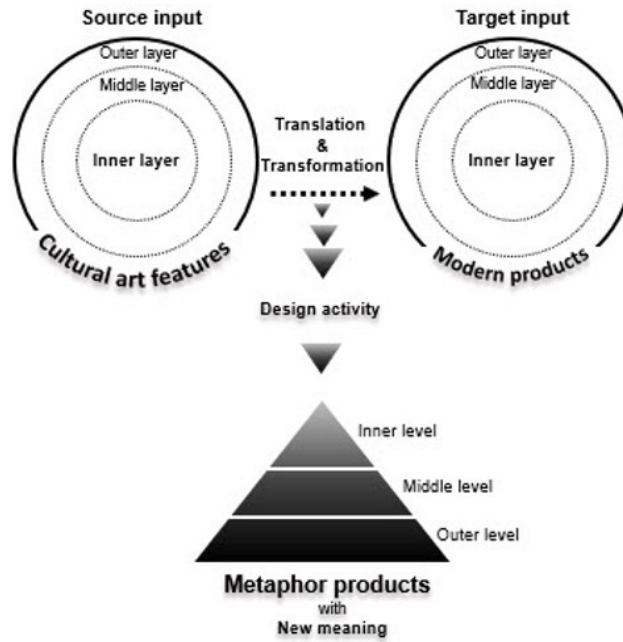


Fig. 3: A conceptual framework for metaphor product design
Source: Author

Source Input

Conceptual metaphors usually refer to how familiar the source input is to make things clearer and easier to understand (Forceville, 2002). People may attempt to comprehend a product's unusual functionality by comparing it to a familiar object from their everyday lives. For example, in figure 1c, garlic characteristics are the source input to be transformed into a seasoning set. The acquaintance with the source input can facilitate the target input's comprehension. Moreover, understanding of the new information depends on the resemblance between all these two inputs. It helps the consumer visualize the metaphorical matching (Blackwell, 2006). Forceville (2008) suggests that design objects are tangible products that allow both source and target inputs to reside together in a complementary and alternative way. This is distinct from verbal metaphors, which are just words that sound similar. The physical features of the hybrids, such as the visible forms, shapes, and colors, make both the target and source input clearer. Since this is the case, most modern people do not know much about cultural art features. However, designing hybrids that track cultural art features to modern products can make cultural art features easier to understand. These matches are made based on how the ideas are related at the conceptual level.

Translation and Transformation

In the process of translating and transforming cultural art features into modern products, the designer discovers a cultural art characteristic and acquires an awareness of the range of cultures and values associated with that cultural art concept. This information is then integrated by the designers with their innate sense of design in an attempt to remedy design problems and make use of all the many levels of cultural characteristics while developing a cultural product (Lin, 2007).

In the translation process, the source input is what the cultural art features explore. These features include those associated with the outer level of form, pattern, and color; the middle level of use, function, and performance; and the inner level of feeling, reflection, and conception. The designer is able to extract design information from a cultural art feature through the use of the scientific method as well as other techniques of inquiry according to this extracting process. After extracting the design information, the designer may then analyze and make use of this knowledge.

In the transformation process, design knowledge is discovered from the design information found in translating the cultural art features. In the process, the designer learns more about these design features and receives more practice with them. At the same time, they are able to apply this design knowledge to transform cultural art features into three levels of modern products, which helps them understand how cultural appearances, behavior, and meaning all collaborate together.

Target Input

Design methods emphasize the creation and implementation of modern products. A designed artifact with freshly established characteristics for modern products might be considered a target input for user comprehension and acceptance. When adding cultural art features as source elements to modern product characteristics, people are prompted to reflect on their lives and develop fresh insights. Similar to cultural art features, modern products can be categorized according to three levels that represent the tangible and intangible elements of modern living.

- **Design activity**

The design activity is engaged with the outcome of the source input, translation, transformation, and target input processes. At this stage, the designer employs all levels of cultural art aspects in designing a metaphor product utilizing conceptual design and a prototype model.

- **Conceptual design**

Conceptual design is concerned with a design that lays the groundwork for production-ready design, considering it as a device a designer employs to establish and visually portray the design's underlying principles (Liu et al., 2015). Conceptual design assists in communicating the designer's vision for the final product's appearance and the desired result. The purpose of this stage is to create a textual and pictorial idea sketch based on the output of the translation and transformation process. During this process, it may be required to modify and adapt the meaning of the cultural art feature into a modern product.

Prototype model

The prototype model is the final representation of how a product is intended to function, and it can display any variety of different levels of detail (Ulrich & Eppinger, 2012). This model can provide the designer with an explanation of how things should appear and function in order to accomplish the performance that was envisioned for the final decision. During this stage, a prototype model was utilized as a device and verification of the metaphor product outcomes of the conceptual design.

Metaphor Product with New Meanings

According to the studies presented in Steen (2002), the primary objective of employing metaphors is to combine two distinct ideas or concepts that were not connected to one another in order to produce a novel hybrid notion or idea. Additionally, the metaphorical idea is strengthened by meaningful associations derived from individual experience. This is due to the fact that people's comprehensive matchings of conceptual metaphors are founded in the embodied experience, which corresponds to psychological actions and practices (Gibbs et al., 2004). The physical outer level matchings associated with the middle level and the inner level provide the basis for the conceptual mapping that connects intangible level with modern products. Users are encouraged to construct and understand new cultural meanings through the lens of their own life experiences and perceptions when such leveled matchings connecting both physical and conceptual levels are present.

Results

The design of contemporary products must not only be useful and visually appealing but also stimulate emotional satisfaction. Consequently, a comprehensive approach to design must seek to comprehend both the tangible and intangible aspects of three cultural levels. To meet the current way of life, modern taste, and lifestyle, the metamorphosis of cultural art features into modern products must be viewed as contemporary aesthetics generated from the blending of cultural art features and modern product characteristics. On the basis process of the conceptual framework model (Figure 3), the metaphor product design from cultural art features as the source input can provide product designers with guidelines for designing modern products with new forms, functions, and meanings of the three cultural levels. The case study demonstrates how cultural art features can be integrated into contemporary product designs as shown below:

1. Source input

The Guardians: Wat Pra Kaew Yaksa (guardian giant) sculpture at the temple of the Emerald Buddha (see Figure 4).

It was in Thai literature that the giant was introduced to the Thai people for the first time. The story of the Ramayana, and particularly Ravana, focuses on the evil side of the conflict, which pits the forces of Rama and Phra Lak entering fighting. In addition to making an appearance in works of Thai literature, the concept of the "giant" also plays a role in the beliefs of Thai people, which date back to the Ayutthaya period. These beliefs hold that the giant acts as a protector of the good and keeps evil at bay. As a result, the majority of the temple's enormous statues were erected in front of the main entrance.

The Temple of the Emerald Buddha is not only the location where Phra Phuttha Maha Mani Rattana Patimakorn, the main large Buddha Image, is enshrined, but it is also the center of the largest of 12 giants, all of which are significant giants from the story of the Ramayana. Twelve figures, or six pairs of Wat Pra Kaew Yaksas, are stucco statues that are approximately 6 meters tall. These statues are adorned with glazed tiles of various colors, such as yellow, vermilion, sea blue, etc., and they stand with batons in front of the entrance to the temple on a pedestal. The arch of the royal balcony, which serves as the entrance and exit to the temple, is protected by giants who stand guard in the role of gatekeepers. Two pairs of giants can be found on the western side, three pairs of giants can be seen running from north to south, and there is a pair of giants on the eastern side.



Fig. 4: The cultural art features of Wat Pra Kaew Yaksa
Source: Author

2. Translation and transformation

In the translation process, the conceptual metaphor of this case study is the protection afforded by the Wat Pra Kaew Yaksas standing guard in front of the temple's entrance and exit. Therefore, translating and transforming the features of cultural art are all associated with the term "protection". On the outer level, the characteristics of the baton and the formidable face of Wat Pra Kaew Yaksas are deemed to have the greatest relationship to the protection, as the baton is the giant's instrument for preventing evil from entering the temple, and the formidable face prevents evil from approaching. To keep evil from entering the temple of a pair of Yaksas guarding the exit-entrance of the temple door, their actions are consistent with the behavior of middle level. And on the inner level, the protection provided by a pair of Yaksas could be interpreted in one of three ways: according to one's beliefs; generally; or according to Buddhism. According to one's beliefs, a pair of Yaksas are said to have the symbolic function of keeping ghosts and the evil eye out of the temple. In general, similar to the actions of human being guards, a pair of Yaksas guard the entrance to the temple to keep out intruders and adversaries. And in Buddhist terms, a pair of Yaksas metaphorically keeps desire, rage, and greed, which are considered to be the main original causes of miseries, from entering the human's mind. Figure 5 shows the conceptual metaphor in translating the meaning of protection from the Yaksas of Wat Pra Kaew.

Translating

Guardian = **Protection**

Level 1: The baton and formidable face

Level 2: A pair of Yaksas standing at the exit-entrance temple door

Level 3: Protection from evil, bandits, and sufferings



Fig. 5: The conceptual metaphor in translating the meaning of protection from the Yaksas of Wat Pra Kaew.

Source: Author

In the transformation process, based on the translation of Wat Pra Kaew Yaksas actions consistent with the behavior of the middle level, and the meaning according to Buddhism on the inner level, the modern product was clued to be a pair of lamps in front of the house gate. Therefore, on the outer level, the batons, and the faces of Yaksas are transformed to be the form of a lamp as shown in figure 6. On the middle level, a pair of Yaksas guarding the exit-entrance of the temple door is transformed to be the function of the pair of lamps with the lighting at night in front of the house gate lamp as shown in figure 7. Therefore, on the inner level, the meaning of the pair of lamps as modern products could be implied to the protection of the meaning either according to one's beliefs, generally, or according to Buddhism. As demonstrated in Figure 8, the translation and transformation processes can reach all three cultural levels.



Fig. 6: Wat Pra Kaew Yaksas transformed into the shape and form of the batons and formidable face
Source: Author

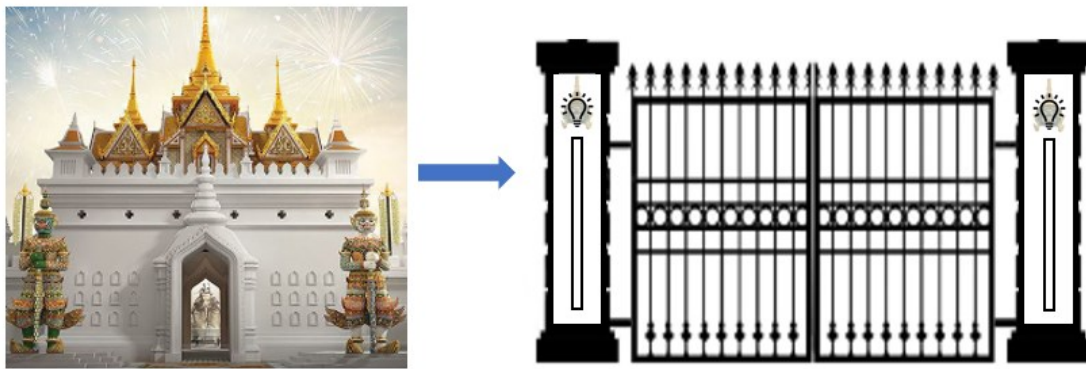


Fig. 7: The location and the duty of Wat Pra Kaew Yaksas transformed into the pair of lamps in front of the house gate
Source: Author

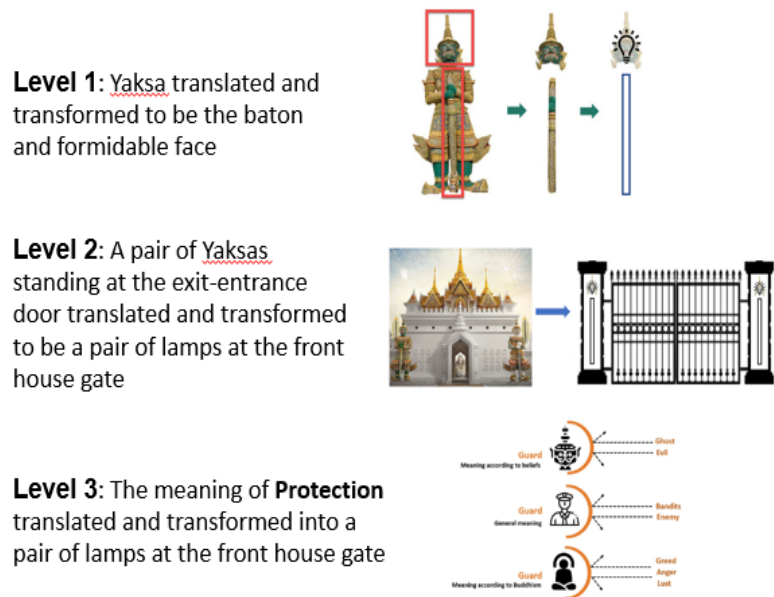


Fig. 8: The translation and transformation processes can reach all three cultural levels
Source: Author

3. Target input

As a result of the prior processes of source input, translation, and transformation, a pair of lamps in front of the house's front gate developed as the modern product that served as the target input. To reach the goal of being a metaphor product with three cultural levels, however, this modern product must still undergo a design process of design activity.

4. Design activity

4.1 Conceptual design

Based on the translation and transformation process, the conceptual design (Figure 9) was developed as follows:

- At day: The pair of lamps can be seen as simple cylinders, which does not provide any clues as to what they are in terms of the concept of "not-self." Jayasaro (2013) said that the Buddha advised ones to examine their experience more deeply in an effort to uncover this self that so obviously exists. Recognizing that life is a flux of occurrences reliant on causes and conditions, but without an owner or controller, is the insight into "not-self" or anatta that is without everything that causes miseries.
- At night: When the light turns on, the pair of lamps takes on its full form of the metaphor batons and faces of Wat Pra Kaew Yaksas. If comparing the darkness to the suffering, when darkness is replaced by light, then the absence of suffering occurs. With this concept, the word "Protection" assumed a new metaphorical meaning in modern products. According to Tealde (2022), one of the significant factors in lowering the rate of crime is the availability of light. Figure 10 illustrates the conceptual design of 'at day' and 'at night'.



Fig. 9: The conceptual design of at day and at night

Source: Author

4.2 Prototype model

The pair of lamps is designed to be a prototype model in the shape of a pair of a long aluminum cylinder, which is metaphor for the shape of a giant baton at Wat Phra Kaew. Based on conceptual design, during the day only the cylinder shape of this pair of lights is visible, however at night, when the light is on, this prototype model depicts the full shape and form of the metaphorical batons and faces of Wat Pra Kaew Yaksa standing guarding at the front of the temple gate. As depicted in figure 10.



Fig. 10: The prototype model in consistent with the conceptual design

Source: Author

Figure 11. depicts an experiment in which light and shadow were evaluated to determine their ability to clarify the meaning of protection throughout the conceptual design.



Fig. 11: The experiment of prototype model in light and shadow

Source: Author

5. Metaphor product with new cultural meanings

The pair of lamps in front of the house's entrance gate represents the final metaphorical production. According to the method outlined in Figure 3's conceptual framework, figure 12 illustrates that the metaphor product design of the case study1 can achieve three cultural levels. On the outer level, the metaphor product characteristics (shape, light, and shadow) are derived from the baton and formidable face of Wat Pra Kaew Yaksa, which is generated from "Protection" since they are viewed as tools for preventing evil from entering the temple. On the middle level, the metaphor product use, function, and performance are developed from the duties of Wat Pra Kaew Yaksa standing guard at the entrance to the temple, preventing evil from entering. Therefore, at the inner level, the new meaning of 'Protection' in the metaphor product is obtained from the consequence of the process of input from the source, translation, transformation, input from the target, and design activity.

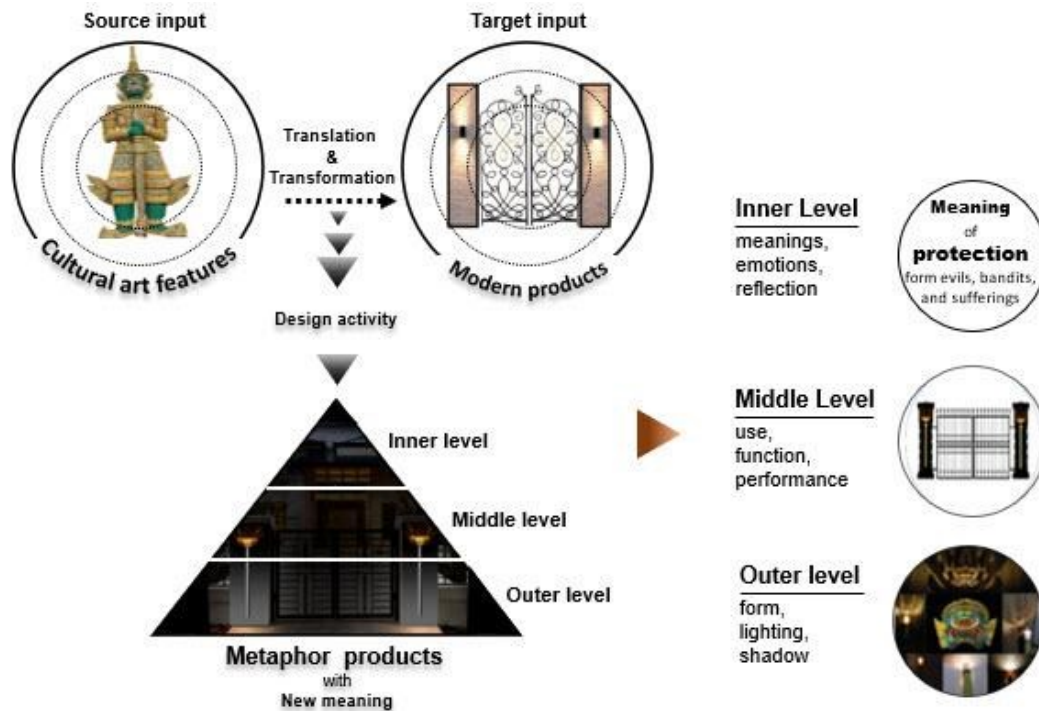


Fig. 12: The conceptual framework for metaphor product design
Source: Author

Discussion

Researchers from a wide variety of academic disciplines have looked into the capabilities and interpretations of metaphor in fact related to creativity of advertising and marketing (Murashova, 2021), teaching (de Knop & Perrez, 2014), political cartoon (Abdel-Raheem, 2021; Denisova, 2021; Silaški & Đurović, 2019), music (Pannese et al., 2016; Rossi, 2020), and art (Fox, 2018; Stampoulidis et al., 2019). This gives the reason that metaphor is considered important and has risen to prominence as a research topic in such a wide variety of fields is that it has the ability to bring together things that are completely different from one another and to open up new points of view by making it possible to comprehend and experience one kind of example in terms of some other (Lakoff & Johnson, 2013). However, the metaphor product design approach has rarely been considered as a means of encouraging users' cultural perceptions. Therefore, the study proposes a graphical framework of metaphorical design to provide guidelines for mapping and integrating cultural art elements and contemporary products metaphorically.

The purpose of the case study is to examine how to apply the graphical framework of metaphorical product design in order to accomplish cultural product design goals on all three levels of culture: outer level, middle level, and inner level. Especially, the inner level is the most significant level of the three cultural levels to consider when designing metaphor products. If the inner level can't be reached, the metaphor product design of cultural products has very little to no value or meaning. Hekkert & Cila (2015) comment that it is not sufficient to simply map source features to a target for the modern product to be considered a metaphor. The usage of metaphor must involve a translation of meaning that transforms the overall experience of a product. In the absence of this case, there is no metaphor, merely juxtaposition. The forms of a sofa designed like a dolphin and a bathroom faucet styled like a flower are unrelated to their function and purpose. They contain a physically mapping from source to target, but no meaningful conceptual relationship between them. In accordance with the concept of a metaphor product, if both source and target have been mapped and merged with source meanings, the outcome is a metaphor product.

In order to achieve success in reaching all three cultural levels, it is necessary to engage in translation, transformation, and design activity. This is a crucial process that requires cultural characteristics derived from cultural art features to be analyzed and synthesized. On the outer level of the case study, since the conceptual meaning of the cultural art features of Wat Pra Keaw Yaksa is "Protection," the result of the translation, transformation, and design activity is a pair of entrance house gate lamps in the form of Yaksa's baton and the lighting and shadow portraying Yaksa's formidable face. On the middle level, the result is a pair of entrance house gate lamps designed with form, light, and shadow from the outer level to imitate Wat Pra Keaw Yaksa standing guard at the temple's entrance. And on the inner level, therefore, the case study derives the new meaning emerged from the outer and middle level as physical hints that encourage users' conceptual consideration to understand and, as a result, bring to mind a metaphor product meaning.

Conclusion

The application of metaphors to the incorporation of cultural art features into modern products can be regarded as very beneficial and valuable to the creative concept that goes into product design as well as to product users from a variety of different perspectives. However, it should be acknowledged that it is not a straightforward and ready-made task that is to be undertaken by product designers. Instead, it is an activity that is challenging to oversee because there are a large number of variables at different layers of this incorporation, which makes it even more complicated. Recognizing and extracting values from cultures, as well as interpreting those values and incorporating them into some meaningful aspects of product concepts, requires extensive knowledge of a variety of fields, including product design, customs, cultural studies, ethnography, and cognitive science, amongst others. In addition to this, the values of new meanings are not physical, and the majority of them subconsciously influence people's perceptions. As a consequence, they are intangible meanings that have the potential to be comprehended.

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