

# Analysis of Emotional Design and Cultural Product Narrative Communication Model

Miao-Hsien Chuang<sup>1(✉)</sup> and Jui-Ping Ma<sup>2</sup>

<sup>1</sup> Department of Visual Communication Design,  
Ming Chi University of Technology, New Taipei City, Taiwan  
joyceblog@gmail.com

<sup>2</sup> Graduate School of Creative Industry Design,  
National Taiwan University of Arts, New Taipei City 22058, Taiwan  
artma2010@gmail.com

**Abstract.** Based on the product semantics model of Krippendorff (1989) and the design psychology concept of Norman (2004), we studied emotional design through narrative structures and Chinese characters. Employing case study and content analysis techniques, we found that designers can express creative ideas and product imagination using the form, sound and meaning of Chinese characters, as well as story elements (medium, role, interaction, spatial and temporal feel). We also made a case study of a designer in Taiwan who uses palmistry to illustrate business strategies for the cultural and creative industries. We adapted the product semantics model of Krippendorff into the cultural product narrative communication model by integrating narrative elements with form and meaning, as well as emphasizing the personal philosophies of designers and user participation. Designers pursuing innovation or promoting culture in product design can utilize this model as reference.

**Keywords:** Emotional design · Product semantics · Story narrative · Form and meaning

## 1 Introduction

Consumers in the 21st century, which has been characterized by excessive consumerism and the aesthetic economy, have many different reasons for purchasing products; function, utility, and price are no longer their primary considerations. As the artistic and emotional elements of products have taken precedence over their functionality, designers are facing the challenge of how to create product features that meet the affective requirements of consumers. Taipei City, in which the author resides, is set to become the 2016 World Design Capital. It is developing itself as an Adaptive City based on three design concepts: Use to User, Function to Feeling, and Hi-Tech to Hi-Touch, creating an outstanding environment, authenticity, and qualia (Lin 2011). Product design concepts are becoming more users-centric and focusing on how to allow users to experience the emotional meaning of products.

There have been a number of studies on product creativity and cultural design and marketing. In relation to design narratives, scholars have integrated the Barthes code

theory with semiotics and cultural studies to develop the concept of cultural codes. However, there are no studies that have integrated narrative elements with the design process of cultural products. This study combines the form and meaning of Chinese characters with storytelling elements, and analyzes the principles of emotional product design.

## 2 Literature Review

### 2.1 Product Semantics and Cultural Creativity

Rooted in semiotics, product semantics is the study of the meaningfulness of interaction between users and products. It emphasizes subjectivity and symbolic contexts rather than form and function. Krippendorff (1989) wrote that manufactured products have two key components - form and meaning - through which users understand the utility of the product (as shown in Fig. 1). Designers must consider the contexts in which users utilize products. Product semantics is not a merely trend or fashion; it is a discipline concerned with how users make sense of manufactured products, how these products are symbolically embedded in the fabric of society, and how they contribute to cultural autopsies.

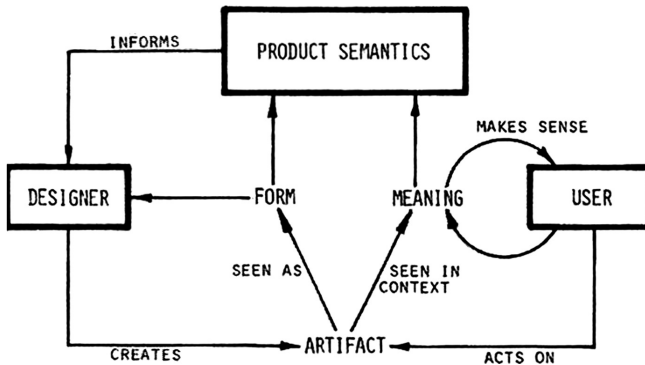


Fig. 1. Product semantics model of Krippendorff (1989)

McCoy (1989) saw product semantics as an interpretation of post-modernism. He believed that products must be meaningfully linked to constructs that satisfy diverse interpretations. We must pursue mystery and spirit in product design, rather than only material elements. According to McCoy, “products make myths tangible, either by reflecting a shared mythology or an individual vision.” Mythology can be roughly defined as the common beliefs that humans create in their pursuit of social order, ethics, and morality. Norman (2004) pointed out that product design seeks to either improve or to create. Innovation means providing a completely different way of doing things or producing something that could not previously be achieved.

According to Lin (2005a), design covers cultural creativity, creative behavior, form, and economic behavior. Because culture is part of the everyday lives of consumers, the added value of cultural creativity makes a product unique and different. Cultural design can be divided into internal, external, and intermediate layers. Externally, products are designed directly from the form of cultural objects. In the intermediate plane, products are designed according to the functions of cultural customs or rituals. Finally, the internal dimension emphasizes the interaction and emotion between culture, product, and individual (Lin 2005b).

## 2.2 Narrative and Story Structure

As its name implies, narratology is a study of narratives and narrative structures. Even in a narrative with non-linguistic material, we can still use language-based narrative research methods to participate. Product design is just such an example. A narrative structure is like the skeleton of a high rise; you can't see it, but it determines the form and quality of the building (Lodge 1992). Using writing as an example, Yang (1998) expressed that before a writer puts pen to paper, he/she must first visualize the completed product and the aesthetic world that he/she intends to create. Writing is a life activity, and the product of writing is a kind of crystallization. He described the process between communicative writing and its objectives as a dynamic "structure".

A story is a set of characters and events that are linked together through time sequence and causal relationships, creating a potentially interesting narrative. The five elements to a story – the characters, the setting, the plot, the conflict, and the resolution – allow readers to clearly grasp the developing logic of the story. The product scenario approach is story-based, using people, times, places, and things (products) to describe a narrative and encourage participants to develop product contexts (Tang and Lin 2011).

## 2.3 Meaning of Form

Words are categorized as phonograms or ideograms. An alphabet system is used in most Western languages and words are phonetic notations that convey messages. Chinese language characters are both phonograms and ideograms, with each one having three elements: Shape, sound, and meaning. Shape refers to the appearance of the character, sound to how it is pronounced, and meaning to the idea or concept that it expresses. For example, the Chinese character ding (鼎) means an ancient Chinese vessel with three legs. The form of the character shows three legs and it is pronounced as ding. The character is interpreted as "tripartite" in meaning.

Chinese enjoy using homophonic elements to express their hopes or good wishes when giving gifts or engaging in religious worship. For example, the words for bottle (ping zi, 瓶子) and peace (ping an, 平安) both start with the same phonetic sound. Radish (cai tou, 菜頭) and fortune (cai tou, 彩頭) also share the same pronunciation. The characters for fish (yu, 魚) and surplus (yu, 餘) are homonyms, so a fish dish is seen to represent bounty (nian nian you yu, 年年有餘). The character for goat (yang, 羊)

forms part of the word for good fortune (吉祥). Bats represent good luck and crab represents gratitude because of the phonetic similarity between the word pairs.

Apart from understanding individual words, an author must also accomplish the following to produce a good piece of writing: Composition practice (word combinations, sentences, and different sentence structure); Writing techniques (expansion, abbreviation, sequels, and parodies); and narrative (theme, content, organization, modification, rhetoric) (Liao 2007).

## 2.4 Emotional Design

Emotions are the attitudes that people have towards their surroundings, themselves and their behaviors. Emotion is a subjective human reaction to an objective situation, an affirmative or non-affirmative psychological reaction to external stimuli (Gong and Duan 2007). Baudrillard et al. believed that instead of buying products for their functionality, people in our consumer society look to products for a sense of fun, an experience different from their everyday routines (Huang 2000). This is why emotional design, whether it aims to provide an imagined or experiential sense of fun, is a challenge encountered by a majority of modern designers.

Psychologist Donald A. Norman (2004) analyzed three levels of design using a teapot as a case study: visceral level (appearance-based), behavioral level (user-friendliness and satisfaction), and reflective level (rationalization of the product, its narrative and its link to self-image). He wrote that the last two dimensions are affected by the experiences, education level, and cultural perspectives of the individual.

As far as how products make a person feel, Goto (2008) explained that most designers use external appearance to bring about the initial surprise (first WOW). However, designers can create a stronger impression by consciously manipulating the psyche of consumers (later WOW). Russell (1980) combined physiological and psychological angles to produce the Circumplex model. The model employs a Cartesian coordinate system where the horizontal axis runs from pleasant to unpleasant (right to left) and the vertical axis runs from high stimulation to low stimulation (top to bottom). A product matching the coordinates for “pleasant” and “high stimulation” creates feelings of excitement, delight, and happiness in the user.

## 2.5 Summary

Based on form and meaning, as well as emotional design, this study explores the structural elements (form) and narrative elements (medium, role, interaction, spatial and temporal feel) of Chinese characters. We developed the product semantics model of Krippendorff into a communication model focused on cultural products. Lastly, we conducted an in-depth interview with an expert in cultural design, in order to gain an understanding of the individual vision and mythology of designers.

### **3 Methodology**

We employed case study and content analysis techniques to research Stone Image Design Co. and its popular cultural products, particularly those with emotive design. Based on our results, we classed design techniques into categories and analyzed shared design principles.

#### **3.1 Case Study: Stone Image Design Co**

Founded by Cheng Xiang Ru, Stone Image Design Co. has researched and developed a range of products based on traditional Chinese culture. The company also formed a strategic alliance with Nova Design Co. Ltd to break into the product design industry. In 2007, the company officially re-launched itself as a design consultancy focused on helping traditional businesses to improve their products and operations through services such as brand and image development, marketing strategy, and product R&D. Its clients are mainly traditional craft businesses in the smaller towns and villages of Taiwan. We chose Stone Image as a case study because its products generally have unique narrative and semantic elements.

#### **3.2 Content Analysis**

We analyzed cultural products that have elements of emotive design. Product images were sourced from the Internet, printed media, and relevant events. The authors of these publications and designers of these products are all well-known professionals in their fields. Their works, which highlight local cultural features, are marketed on an international as well as local basis.

### **4 Discussion and Conclusions**




Telling a compelling story through a product is an effective technique in the competitive design industry. Through storytelling, designers elicit an emotional response from consumers. Users construct, interpret, and assimilate the narrative, and even provide feedback useful to product design and manufacturing. This creates a cycle of design, ideas, and imagination (Chuang and Huang 2009). After categorizing the product images collected, we identified that products are designed to convey a sense of fun and uniqueness, as well as inspire users to associate the products with stories. The products in this study, which are analysed in the table below, express creativity through the form and meaning of Chinese characters, as well as structural narratives.

#### **4.1 Product Design, and the Form and Meaning of Chinese Characters**

Chinese characters comprise three elements: Appearance, sound, and meaning. Words are created through shape, pronunciation, and meaning. Product design operates

through similar constructs. We analyze the sample products based on these three elements as well as the three layers of cultural design (Table 1).







**Table 1.** Comparing product design to the form and meaning of Chinese characters

Character	Technique	Product interpretation	Image	Layers of cultural design
Form	Appearance	Product: Red bean tart Appearance: Circular and split in the middle Meaningfulness: This product is named sep-puku, which refers to the ancient Japanese custom of ritual suicide and implies apology and contrition.	 <p>(Source: <a href="http://mei.life101.com.tw/653671#ixzz3PiIs7lc1">http://mei.life101.com.tw/653671#ixzz3PiIs7lc1</a>)</p>	External (form): Split appearance Combined (cultural ritual): Sep-puku ritual
Sound	Homophone	Product: CD case Appearance: Butterflies Meaningfulness: Homophonic sounds are used to allude to the Chinese word for good fortune.	 <p>(Source: from the designer Cheng Xiang Ru)</p>	Intermediate (customs): Good wishes and blessings
Meaning	Collective meaningfulness	Product: Calendar Image: Daily life commodities traditionally used in Taiwan Meaningfulness: A collection of bygone memories	 <p>(Source: <a href="http://www.taaze.tw/sing.html?pid=61100001430">http://www.taaze.tw/sing.html?pid=61100001430</a>)</p>	Internal (emotion): Nostalgic memories

#### 4.2 Association Between Product Design and Story Narratives

A story is a set of characters and events that are linked together through time sequence and causal relationships, creating a potentially interesting narrative. Marketing and promotional campaigns can of course tell a story, but so can the product itself, using a dynamic narrative structure. The products shown in Table 2 are designed using artistic or cultural elements and convey a sense of fun and creativity.

**Table 2.** Association between product design and story narrative

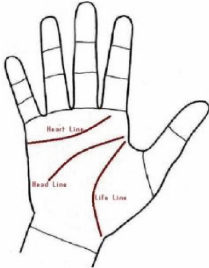
Story	Method	Product	Image (and product designer)
Carrier	The product is used to display a famous Chinese calligrapher's works	Pepper shaker (The individual components of the product can be freely manipulated)	 By Cheng Xiang Ru (Source: from the designer)
Role	A role-playing doll	ART TOY (combining the work of Chinese contemporary artist Yue Minjun and graffiti king KAWS)	 By Yue Minjun and KAWS (Source: <a href="http://www.hua-gallery.com/artist.html">http://www.hua-gallery.com/artist.html</a> )
Interaction	Emotional interaction between product and user	Product: Mirror (Inspires the user to reflect)	 By Eglè Stonkutė (Source: <a href="https://www.behance.net/gallery/17694711/Reflections-Narcisuses-and-other-flowers-Mirrors">https://www.behance.net/gallery/17694711/Reflections-Narcisuses-and-other-flowers-Mirrors</a> )
		These chess bags are called "hope bags" (inside the bag is a woodcut chess set, which provides the user with an opportunity to visit with others while playing chess)	 By Cheng Xiang Ru (Source: from the designer)
Spatial feel	Image are placed randomly on the products	Teaware designed in collaboration with Yue Minjun and Qingting Design Co (the black birds are placed at the top, middle, and bottom of the cups)	 By Shi Dayu (Source: <a href="http://blog.artron.net/space-610077-do-blog-id-1026207.html">http://blog.artron.net/space-610077-do-blog-id-1026207.html</a> )
Temporal feel	A futuristic or nostalgic sense	A conceptual display of containers and boxes named "Museum of Tomorrow"	 By Mads Hagstom (Source: <a href="http://blog.yam.com/balance1014/article/16982754">http://blog.yam.com/balance1014/article/16982754</a> )

### 4.3 Life Philosophies of Designers

Cheng Xiang Ru, founder of Stone Image Design Co, uses palmistry as a metaphor of the development of the cultural industry, calling it “a new gravity” (see Table 3).

The Need-hierarchy theory of Abraham Maslow is used to illustrate how life management principles can be applied to running a design company. In the short-term, the company must establish income sources and develop its role in the market. Next comes strengthening market position and image, and building a strong client base. The long-term goal is to realize the ultimate vision of the company directors. Stone Image Design Co. is operated with the aim of achieving a balance between its ideals and the market realities.

**Table 3.** Relationship between palmistry and cultural products

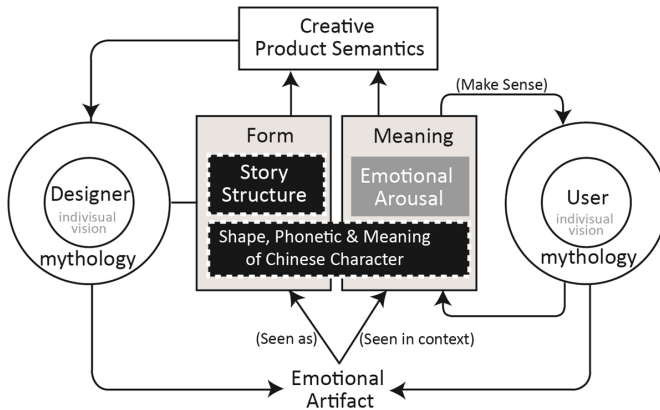
Palm line	Palm	Product	Business strategies
Life line		The personality and life of the product	Strategic alliances Specifications, copy models Extend product life
Head line		The soul of the product	Brand image, Brand story Product distribution channels
Health line		Quality of the product	Combination of media Family product line

A SWOT analysis showed that Stone Image Design Co. faces the same competition and pressures as any other company. Its strength is in its founder Cheng Xiang Ru and her extensive commercial experience, likeability, reputation, and interpersonal networks, as well as his experience in government consulting roles. A key turning point came when Stone Image re-launched itself as a cultural consultancy company, which allowed it to establish key alliances and progress in the integration of culture with technology. Cheng Xiang Ru still works closely with her colleagues to preserve Chinese culture and unique local features. This case study of Stone Image provides us with a good example of the mythology of designers.

## 5 Conclusions and Recommendations

This study discusses the psychological levels of emotional design, the form and meaning of Chinese characters, story narratives, and the life philosophies of product designers. Building on the product semantics model of Krippendorff, we developed a cultural product narrative communication model Fig. 2:





**Fig. 2.** Cultural product narrative communication model

This study provides references for researchers and academicians, as well as innovative design criteria that can be useful to designers in today's competitive environment. In future research, we will interview more designers and make a further study of the emotions that product design evokes in users.

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