Depicting the Cultural Product Design Process -An Grounded Theory Approach

Elim Liu, Southern Taiwan University of Science and Technology, Taiwan
Ze Hong Wang, Southern Taiwan University of Science and Technology, Taiwan
Yu-Ting Lin, Southern Taiwan University of Science and Technology, Taiwan
Tseng-pin Lee, National Quemoy University, Taiwan

Abstract
This is the age of niche market, designers are challenged to design from their cultural context, to highlight the cultural value of the product. Therefore, designers become agents of cultural context, and should understand how cultural product acquire and communicate cultural meanings. However, the design process of cultural products remains a black box that needed to be modeled. We thus interviewed 5 cultural product designers in Taiwan, and tried to depicted the design process based the in-depth interviews. To achieve the research aim, we followed the methodology of the grounded theory, which is an inductive heuristic method that is appropriately suitable to be adapted for the implicit design processes of cultural products. Our research depicts the cultural product design process, which features 5 main parts of –cultural references, design motives, function design, semantic design, and sensory design. However, the 5 parts are not separated, they worked and communicated together to create the culturally appreciate product design.

Keywords: Cultural product design, Grounded theory, depicting design process

iafor

The International Academic Forum
www.iafor.org

Introduction

Nowadays, with the huge progress of production technology, lots products were manufactured to satisfy the needs of people, however, they also enable a degree of (both individual and group) identification. Consuming a product no longer means merely using, but also experiencing. If a product embraces cultural meanings, then these experiences would be directly related to the culture that the product represents. The main difference between cultural products and general commodities lies in the establishment of cultural symbolism codes. As Hsiao (2009) defined the three elements of cultural products: (1) as the material carrier of cultural symbolism; (2) as the object in which cultural symbolic meaning stored in collective consciousness; and (3) the relevance with the cultural that the product refers to. The three elements make the design of cultural products must be reasonably extract from the cultural context to produce the symbolic design. Because the construction of culture is under the shared experiences of a group of people. Therefore, it is necessary for designers to understand the decoded meaning while the product is perceived by the people.

On the basis of these premises, we propose this exploratory study for proposing a preliminary conceptual foundation of the cultural product design (CPD) process. We attempted to develop a bottom-up point of view to understand how designers' express, pursue and communicate cultural values in their CPD process. In other words, our study focuses on current design practices to start building a shared knowledge of CPD.

Research methodology

Smith and Morrow (1999) pointed out that to develop the design process must meet the need for both 'academic- and practitioner-oriented components' in these models. However, we found no consensus on how to scientifically build a design process model from scratch.

Nonetheless, the grounded theory is a method for experience based qualitative research, the grounded theory is rooted from the data to establish the theory; through the cycle of induction and deduction, the huge original collected data is reduced, transformed and abstracted into concepts and form the theory (Strauss and Corbin, 1998). Therefore, the grounded theory is suitable to depict the implicit process of CPD.

Research data were collected through in-depth interviews of CPD designers, who were selected on the basis criteria that he/she had designed cultural products which had launched the market and had been staying in the design industry until now. In total, 5 designers have been interviewed. The designers' profile are listed in Table 1.

Table 1: Designers' profile

No.	D1	D2	D3	D4	D5
Gender	F	M	F	M	M
Age	27	35	33	28	45
Design Career(years)	3	10	8	4	20
Design project	graphic design	life product design	package design	product design	design director/ product design

All designers were conducted interviews lasted one hour on average. The interviews were progressively carried on according to emergent insights so as to allow the exploration of the designers' on the following aspects: design motivation; design process and dynamics; CPD conceptions and executions. We then analyzed the verbatim manuscripts according to the procedure of Grounded Theory.

Data analysis is of great importance for Grounded Theory. The analysis consists of three coding phases: open coding, axis coding and selective decoding. Open decoding is a process of decomposing, examining, comparing, conceptualizing, and categorizing data. 'Axial coding', that consists of the progressive aggregation and condensation of codes into broader categories; and if the conditions, contexts, strategies of action, and outcomes of these categories are all related to the same phenomenon, they are integrated as subcategories. 'Selective coding' – consisting of the abstraction from data and the interpretive detection of connections among categories in order to find the pivotal concept that articulates the whole process under investigation.

This systematic coding process, which makes the original data gradually conceptualized and categorized to establish the theory, was conducted by three researchers and discussed in several meetings in order to fine-tune the coding system and guarantee the consistency of the analytical process.Table2 illustrated examples of the coding procedure.

The analysis was supported by the software MAXQDA (11), through the aid of the software the data can be linked, coded and memos can be written and linked to all materials. Visual representations of code distributions and co-occurrences can be obtained.

Table2: Examples of the coding procedure

Quotations (No. of designers)	Open coding	Axial coding(with orders)
This is my grandma's sewing machine. While the era of economic take-off, family OEM was common, every mother would take some sewing works to earn extra money. (D1)	Memory about grandmother's era and machine	1.Memories 2.**Cultural references**
We designed three characters, "Lady Pineapple", "Watermelon Ogisang" and "Mango-chan". They represent the personality of Tainan people. Lady Pineapple represent the Gold Diamond Pineapple cultivated in Tainan, she is rich and fabulous, stunning all over the field, because the gold diamond pineapple is really delicious.(D2)	Personalize the local specialties with the character of the local people	1. Anthropomorphic 2. **Semantic design**

Findings

Our research suggests that, according to the designers' perspective, CPD appears as a multi-dimensional concept combining 5 facet as Design motivations, Cultural references, Consumer behavior, Semantic design, as well as Sensory design. The whole CPD process aimed at creating a cultural experience for consumers. We will illustrate the 5 facet in the following paragraphs:

Design motivations

In the interviews, most designers who dedicated in CPD showed strong motivations for doing the designs, and it can be categorized as 3 types of motivations-the desire of creation, strong sense of mission, and the linkage of memories.

'We have been on the way of creation and have been completely motivated by curiosity and fun.' (Designer 4)--*Desire of creation*

'Beauty is the premise of all things, the main concern. Because you see, without beauty, our product is the same as roadside selling stuff, if it is not beautiful.' (Designer 2)-*Desire of creation*

'Because if you missed this thing (the culture), you will never have it, you can't find it anymore.' (Designer 2)- *Sense of mission*

'To preserve local industries, we tried to make some innovations, to do some different design, so that the traditional industry can continue.' (Designer 4) -*Sense of mission*

'It's been 50 years since my grandpa's era until now, so it seems to be a link between me and grandpa.' (Designer 1) - *Linkage to personal memories*

'The reason why I designed for the shop is because I lived in Beidou town located in Zhanghua. The shop is famous and the collective memory in our small town.' (Designer 3) - *Linkage to collective memories*

Cultural References

Cultural references are the central part in CPD activities, which motive designers, and provide rich connotation and inspirations for creativity. The interviews showed us 3 main catalogues of cultural references: the people, place, and production.

'In the process we find that the traditional craft is actually a great thing…. It is originally very delicate, so from it came out beautiful design works.' (Designer 2)-*Production-craft*

'We looked for materials along the route and finally found in Tainan, we found the tatami.' (Designer 2)-*Production-traditional industry*

'We picked 8 meaningful monuments to design a series, these 8 monuments were relevant to the history of Tainan city.' (Designer 5)-*Place-history*

'I'll choose this because it is more earthy, ancient, and full of human touch.' (Designer 3)-*People- human touch*

Semantic design

Designers showed us in the interviews how they transformed, interpreted and conveyed meanings of the cultural heritage into their design. The design synthesis processes were classified into 4 categories and illustrated the axis structure of Semantic design.

1.   Storytelling

'How do we tell stories? We use symbols to convey the words of blessing, such as in the omamori of Judicial museum, we designed the symbol" traffic safety", people do not understand it from the beginning, but we illustrated the story that, Judicial museum was originally the site of the horse barracks, from the entrance of the museum you can still see the pillar with calligraphy "Horse Barracks" on it, It used to store the transport equipment here, so the" traffic safety" was blessed. Thus people will understand the allusion and be impressed.' (Designer 5)

'What we want is to arouse resonance, thus customers are not only buy a product but also a story.' (Designer 2)

2.   Anthropomorphic

'We designed three products, called "Lady Pineapple", "Watermelon Ogisang" and a "mango chan", separately. Which indicated the specialty of Tainan, "Mrs. Pineapple" represented the Golden-diamond pineapple, she is a rich lady, shinning and stunning. "Mango chan" is a little girl, only in the summer will she appear; "Watermelon Ogisang" is a rugged, middle-aged uncle, riding a motorcycle, wandering through market places and temples. '(Designer 2)

'We designed the omamori as mascots, and named them "Xiao-Yu" and "A-Shou", a girl and a boy. This seal illustrated their story: when they're studying in the Confucius Temple, the boy peeked at the girl's answer.' (Designer 5)

3.   Metonymy

'"Tainan walking" is a brand to share the charm of this city, we adopted the flower essence from LiuJia, since it is an orchid cultivation center; then we adopted the sea salt from the coast of Chigu and the mudstone from Ryugasaki to make our soap series. '(Designer 5)

4.   Create novelty- Upgrade/ transform

'We picked one old photo, a streetscape from the Japanese-Occupied Period. We designed a postcard that looked like the old photo, but there was a patented lens in it, and when the lens was opened, the 2d street view turned into a 3d view.' (Designer 5)

'We use the material of Tainan Jing Liao's traditional plastic basket to do the purse. Why is it an experiment? Because it's not a fabric. But it brings us the sense of transparency and coolness. I began to wonder if it could be made into a product. The product became one of the 2017 top ten creative products in Tainan.' (Designer 2)

Customer behavior/function Design

During the CPD process, designers took the interactions among users, products, and environments into considerations. Respondents depicted 3 types of consumers as pragmatic individuals, looking for fulfilment variant needs through the product. The axis structure of customer behavior level was illustrated in figure 1.

Firstly, most designers positioned the cultural products as gifts, which young people would buy for friends and express the blessings. However, the young people's gifts are interesting rather than formal. Hancock et al. (2005) indicated the "positive and pleasurable" aspects of interactions as Hedonomics. Hedonomic design included encouraging challenge and exploration, as these are among the sources of pleasure.

'On New Year or Mid-Autumn Festival, young people choose our product as their first choice gift.' (Designer 3)

'In Christmas we launch Christmas products, it is limited, and then the New Year products only launched in New Years' time, it cannot be ordered in advance. So our creation followed seasons and festivals. Because life is so richly, we celebrated this festival, and then after it, there is another shift in the next festival.' (Designer 2)

'The function, is somewhat like a blessing, he may buy it as a gift, for a special blessing.' (Designer 5)

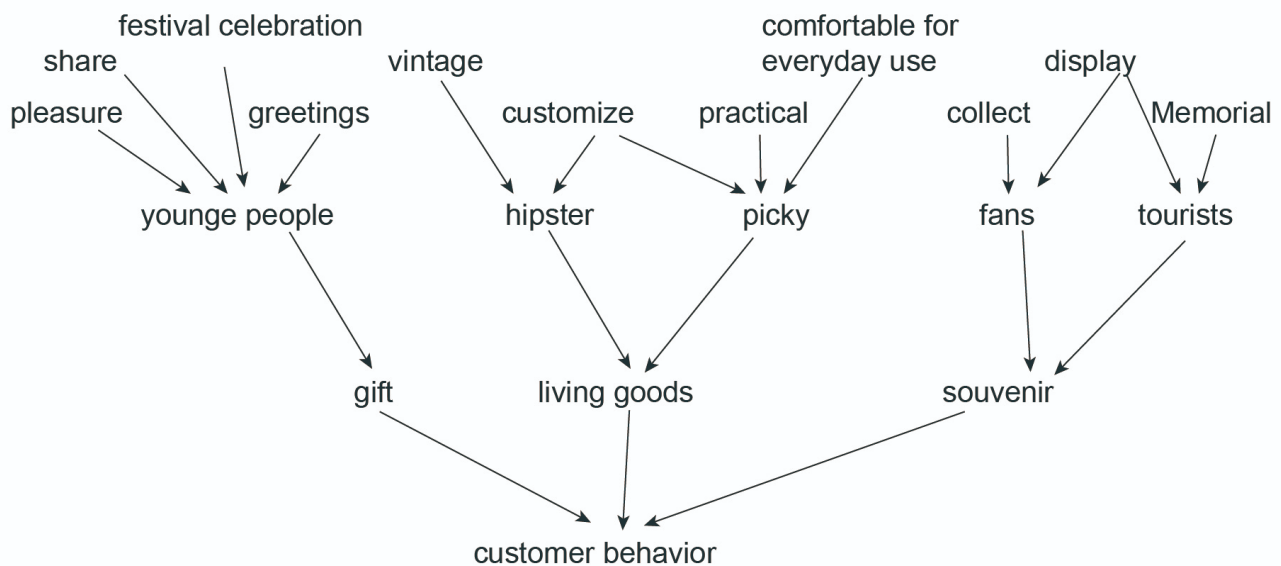'Is this product going to be fun or humorous? What we want is to arouse young people's resonance.' (Designer 5)

Figure 1: The axis structure of customer behavior design

Secondly, the consumer is seen as picky, having developed high taste of quality. They bought distinguished products for everyday use, because the products are practical and match their lifestyles.

'The high price product, this is for really picky people to buy.'(Designer 5)

'He may be a pompous person, or someone who likes to have a little more detail on his appliance. It's the man he's willing to spend a lot of time dressing up on. ' (Designer 4)

How the mid (behavior/function) level designs satisfied the discerning customers? The data emerges that respondents made every effort to improve the quality and style to adapt to everyday use and even customize products for customers.

'I have a customer who is an obstetrician, and we used the Nishijin woven textiles to customize the product for him. It was a waist bag that looked like a Japanese-style, radiant, and he took it out to work every day.' (Designer 2)

'So we made it a little bigger ... as a side bag, the size is for Taiwan consumers, because Taiwanese really love to use long wallets…Not only has the size been expanded, but the versions have been modified. '(Designer 1)

Thirdly, some cultural product may be designed as a souvenir for tourists.

'The consumers were probably mainly tourists, we positioned this products as souvenirs. ' (Designer 5)

'Emma is a piece of bamboo, so tourists will buy it, then write down the blessings and hang it on the square.' (Designer 5)

Sensory Design

On analyzing the embodiment of culture, the scholar He (1992) divides the "cultural space" into three structural levels, in which the external, tangible and visible level is the "outer level", which the appearance and first impression of products that perceived by customers. Norman (2004) defined the level as "visceral", since it is perceptually based, biologically determined and intuitive. In this level, although visual dominates the impression of product appearances, it is accepted that the full range of human senses influence response to design. Therefore, this study depicted this level as sensory design.

How to design the cultural product to address a deep first impression for consumers? Most designers associated with specific cultural references. Through the design of visual elements such as lines, colors, images, textures as well as other sensory cues(smell, touch, and taste) that comprise the products, to arouse the viewer's familiarity with the cultural heritages, entities and concepts, which produces the transformation of memories, emotions, experiences, and contribute to aesthetic impressions. According to respondents' perceptions it appears as the pivotal factor for the CPD process. In Figure 5, coding related to the 'sensory design' described below is summarized. And the examples are related to the visual cues:

'This (the product) is a retro snack in Zhanghua (A county in Taiwan), so I used the *figure* of the founder of Li Old Town, plus the *landmark* of Zhanghua Beidou. (Designer 3)'

'Trough reviewing the cultural religious context of Tainan, we found the periapt (Yu-Shou), which is the omamori of Japan, they brought it from China in Tang Dynasty. That is to say, it is in fact a Chinese object. So we developed the product with the most standard *form* of the periapt.' (Designer 5)

The other sensory designs were about touch, taste, and even olfactory:
'We were looking for *textures*, until we found the tatami. Quan-Xing tatami store in Tainan is very famous, and it has been more than 100 years. I got the material, and then we made the tatami purse.' (Designer 2)

'These patterns are hand-dyed, not printed, so the *touch* is better.' (Designer 2)

'The product is called "Blessings full of cups". It *taste*s traditional, because the wax gourd sugar is placed under the cup. In the past, wax gourd sugar is for worshipping on festivals, because it contains an auspicious meaning.' (Designer 5)

'Liujia was the orchids cultivated area, and we found the floral essence over there and extract *scent*.' (Designer 5)

The phases of the CPD process

To summarize our findings, Figure 2 offers a comprehensive overview of the exploratory framework of the designers' perspective on the process of CPD. On the upper part of the figure is the source and driver of CPD; the cultural references enticed the motivation of design, on the other hand, for designers that full of creation

desires, the culture references provide rich inspiration and content for them to explore. On the right side of the figure, the customer needs are the other main considerations in the design syntheses.
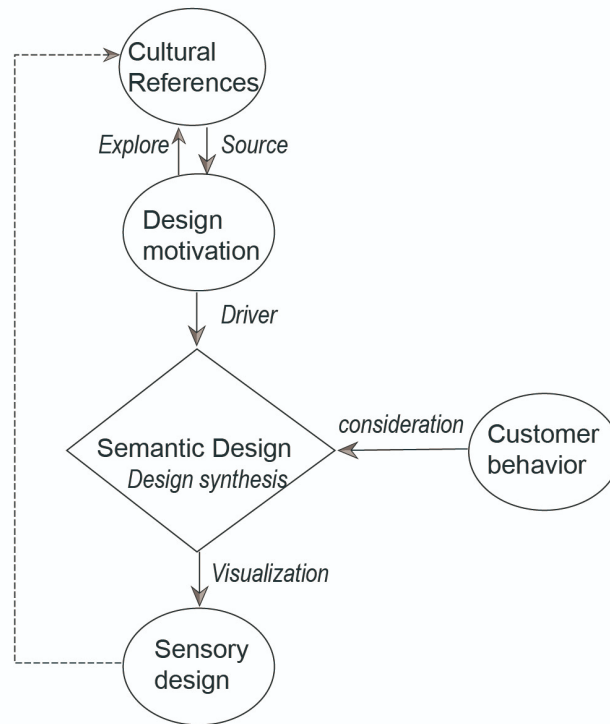

Figure 2 conceptual framework of the CPD process

On the central of the figure, the semantic design emerges as the critical phase for the CPD process. It is mainly in this phase that designers establish the overall semantic character that the product should communicate. As Hart (1996) says, "Both the artist and the persuader use their imaginations to engage their audiences' imaginations." (p, 10). Designer can use different synthesis to influence how their customers will perceive the culture they want to express. Sensory design is the final phase, designers visualize the concept by carefully select and draft design vocabularies like color, form, patterns, texture…,the selection, emphasis, combining, and sequencing of the vocabularies are critical to achieve the aesthetic quality.

Conclusion

The CPD grounded theory approach provides empirical evidence that fills a gap between theories and practice of how designers integrated cultural values into the product design to reflect the humanity and improving the quality of life. By depicting the CDP process, we can the consistency and continuity of the ideology throughout the design process. That means the sensory design, the semantic design, and the considerations of behavior are all integrated in the same cultural value.

However, our proposed CDP process is preliminary and needs further confirmation. We still need further data collection and analysis in order to achieve a better understanding and in-depth insight of CPD.

Finally, we hope that this work will motivate further empirical research in design practices, and integration of the grounded theory and other qualitative research method to reveal the creative process of design activities.

References

Hancock, P. A., Pepe, A. A., & Murphy, L. L. (2005). *Hedonomics: The Power of Positive and. Ergonomics in Design.*

Hart, Roderick P. (1996) *Modern Rhetorical* Criticism, Boston: Allyn and Bacon.

He, X. L.(1992), *The Worship of Chinese Gods of Nature,* (Shunghi: San-Lian book store [Shanghai Branch) (in Chinese), pp. 3– 10.

Hsiao, M.Y. (2009), Research on Cultural product of Totem-type and ritual type (*in Chinese*). *14th CID Annual Design Conference*. Taipei, Taiwan.

Norman, D. A. (2004). Introduction to this special section on beauty, goodness, and usability. *Human–Computer Interaction,* 19(4), 311-318.

Strauss, A., & Corbin, J. (1998), *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Sage Publications.

Smith, R. P., & Morrow, J. A. (1999), Product development process modeling. *Design Studies*, 20(3), 237–261.

Contact email: elimliu@stust.edu.tw