Design Studies and Intelligence Engineering
L.C. Jain et al. (Eds.)

doi:10.3233/FAIA220695

Exploring the Chinese Design Concepts That Shape China's Cultural and Creative Products for Museums

CHENG Hui [a,b,c], LIU Bingjian [a,1], LUO Shijian [b,2], XIE Jing [a], XIA Liang [a]
[a] *Faculty of Science and Engineering, University of Nottingham Ningbo China*
[b] *Zhejiang University of Finance and Economics*
[c] *International School of Design, Ningbo Innovation Center, Zhejiang University*

Abstract. The paper aims to construct a framework for museums' cultural and creative product design and summarize the potential gaps in this field. To achieve this goal, the author used a literature review method integrated with a systematic review and bibliometric analysis. In the analysis stage, the paper identified two significant aspects and seven themed clusters of design research and discovered four primary potential gaps that need to be filled in the future.

Keywords. Design, Product, Museum, Culture and Creativity, Literature Review

1 Introduction

As an inseparable component and unique feature of the Chinese Culture System, the development of museums' cultural and creative industry in China is emphasized by many policy documents. In the Chinese design research community, the inquiry on how to carry out the design practice of cultural and creative products for museums is one of the essential proportions. Current research mainly focuses on design methods and has already produced various outcomes [1]. Since each study has its own emphasized aspect, it is challenging to offer readers a systemic framework of museums' cultural and creative product design in China. Plus, the review on this facet is particularly missing in Chinese academia. Thus, a comprehensive understanding of the design discipline that offers an academic context for nurturing museums' cultural and creative industries is desperately needed. This paper tries to review the progress of Chinese design research, construct a framework for museums' cultural and creative product design, and summarize potential gaps in this field.

[1] Corresponding Author: Bingjian.Liu@nottingham.edu.cn
[2] Corresponding Author: sjluo@zju.edu.cn

2 Literature Review

2.1 Method

The method mixed with extensive review and bibliometric analysis is applied in the review process. As *Figure 1* illustrates, an extensive literature reading on the design discipline was first conducted. Then a map with clustered themes of design discipline (a1) was drawn manually (*Set-1*). Next, the bibliometrics analysis of publications was carried out with the software "Coco" [2]; after this process, a map of clustered themes (a2) was generated automatically (*Set-2*). In the later stage, a1 and a2 were grouped into "A" (*Set-3*). The hypothesis was that several hidden trends that were mentioned previously might be found to offer the research community other choices and widen their perspectives for further research in this field.

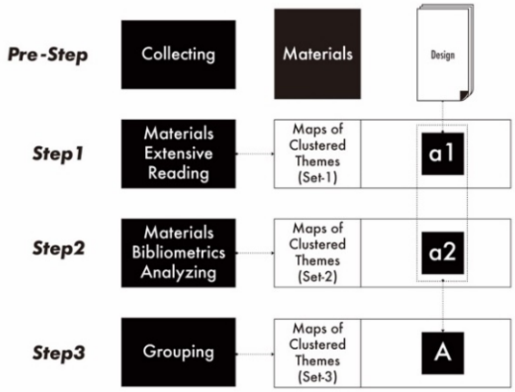

Figure 1. Procedure Explanation of the Method Application

2.2 Analysis of Design Literature

2.2.1 Materials Extensive Reading on Design

- *Province #1: Product Creation (Traditional Product Design)*

The primary centre of traditional product design research is the "Form" of the product. And the research objectives are symbols and meanings, respectively referred to as semiotics and semantics in design theories. These two fundamental and significant concepts work together to deliver intentions through symbols in the form and shape of products [3]. Since cultural and creative product design must integrate cultural elements into product functions without conflicting visuals and meaning, these western theories of semiotics and semantics determine the success of such a product's creation [4]. In other words, the critical process of creating a cultural and creative product is the translation of cultural elements to fit the modern context, in terms of product functions and aesthetical standards.

In the theory of Design Semiotics [5], the "signifier" and the "signified" are the two basic concepts corresponding with symbol and meaning. The signified is complex among the two concepts; it has two dimensions: denotation and connotation. By reading the denotation, users and customers know the cultural elements, the functions, and the

possible way of utilising them. Although functions are essential for a product, the focus of designing a cultural and creative product is the translation of cultural elements. To translate them correctly, the computer-assisted method of "shape grammar" [6] and the compromised pattern creation [7] are two primary methods. The connotation demonstrates the spirit of cultural elements or products' different emotional and cultural experiences. Since both are elusive, the commonly used translation strategy for the connotation is the design rhetoric, including the metaphor [8] and metonymy [9], mentioning narrative design [10] and experience design as well.

However, demonstrating the connotation of the product is not an easy task, and it is even tougher in the design of the cultural and creative product, for understanding the broad and diverse Chinese culture correctly is rather difficult for today's designers who grew up in an era significantly influenced by western-styled culture. Realising this weakness in grasping the Chinese culture, the attempts to study how the ancient artificial were created have been widely conducted in China with outputs that are easily accessible. The Chinese design research community developed this research field, and their passion has not been extinguished since the modern design was formally introduced to China (the 1980s). Named "the Chinese Design System" [11], it aims to fulfil the desire to revive its long historied culture and rebuild its people's self-confidence. In this field, the Chinese scholars tried to derive design theories from the ancient classics, transplant them into modern design context after modifications, and explore how the ancient Chinese translated their ideology and philosophy for living into design forms of daily necessity. At present, there are plenty of culture-element-centred outputs in design journals trying to explain the connotation of ideologies and concepts behind the daily artificial, including clothing (costume[12], crown [13], jewellery [14], cloth pattern [15], etc.), eating (food mould [16], food package [17], food container [18], etc.), living (garden [19], furniture [20],decoration [21], etc.), and others (book design [22] , ink stick [23], etc.). For cultural and creative product design, these research fields provide rich resources to comprehend culture better and reduce the translation difficulty in cultural connotation.

- *Province #2: Social Design (Transformed Product Design)*

As is widely accepted, social design is a field whose design objectives are from public issues, including education, health, transportation, inequality, sustainability and even policy. Admittedly, defining social design, in the beginning, is a scholarly convention. Yet, it is still difficult to define social design at present [24] for both the methods for research and practice are fuzzy, and it still cannot be treated as a discipline [25]. To worsen the situation, the social design also has other variants, such as "social innovation", a term widely used in design papers. However, according to Ezio Manzini, who wrote *An Introduction to Design for Social Innovation*, social design and social innovation are different, although they share some similarities [26]. The editors, who organised the special feature "social design" in 2016 on the world's leading design journal *International Journal of Design*, agreed with Manzini's interpretation though, but insisted on using the former to title their special issue because the latter is only a narrow aspect of social design, these scholars further pointed out. Indeed, the definition of social design may vary according to the ideologies of designers and the background where design practice is set.

Despite the deficiency in discipline establishment, social design has a history almost the same as modern design research mentioned above. After witnessing the damages and threats that commerce posed to the environment and sustainability, the contemporary

design practice was criticised as its accomplice. In the 1970s, the concept of design's social responsibility was initially put forward by Victor Papanek [27], generally regarded as the origin of social design. In Papanek's ideology, the responsibility of designers is neither for their customers nor their customers' sales, but for products' users, society, and the environment [28]. Later, he developed his theory and argued that designers should pay attention to the vulnerable people in all regions to fulfil their educational and medical meets and help them keep pace with the developed society [29].

Admittedly, for designers who live in urban areas, it is difficult to understand how to help those "users" living in underdeveloped or developing regions since there is a vast gap between them, as well as the fact that few people themselves usually have any idea of what they intend for, thus, how to discover the actual needs is an obstacle faced by the designers. To better understand their requirements of them, the methods frequently used are co-design [30] and participatory design [31], and design thinking is often emphasised [32] among the social design outputs. Although, on some occasions, including some research papers [33], co-design and participatory design are treated as equivalent methods, they differ and have their applicability: co-design is used to work with the expertise demanding the co-workers to share their knowledge, indicating that co-design is used with any walks of experts; In contrast, participatory design only requires the participants to share ideas rather expertise, meaning that this method is suitable for collaborating with the mass [34] and a way of demonstrating social inclusiveness.

Typically, in the practice of social design, products, services, or systems integrated with products and services will be generated as solutions to most problems. However, some literature mentioned that the outcomes of social design are always uncertain and even unpredictable beforehand [35], and even on many occasions, they are beyond the traditional categories; for instance, organising activity can be a design output [36]. In the past decade, this has led to an argument about design definition [37]. However, this disputation does not last too long, and today even no attention is on such a topic in academic design circles. Instead, the immaterial outcomes are widely accepted as design objectives. To some extent, design practice's output form is no longer crucial. Design is regarded as the management of knowledge and idea sharing, which is demonstrated by the approaches for social design, such as co-design and participatory design. In other words, more and more social design cases emphasise the core value of design education: to influence people with creativity and equip them with tools for innovation instead of the traditional goal of commercial benefits enlargement [38]. Since design has transformed, design outputs' expectations should not be restricted. Any forms of the outcomes need to be accepted because, as a discipline relative to creativity, design discipline should be more active in extending its boundary and more open to various outcomes.

After reaching this consensus, public governance [39], including policy, has become one of the emerging immaterial objectives of social design. However, this field's outputs produced by the Chinese design research community are not many. Most papers aim to introduce the experience of "policy design" implemented in other countries [40], and the other authors tried to extend the history of Chinese design practice in policymaking [41]. Apart from the focus on policy, another frequently appearing keyword is "industry", indicating the topic is highly relative to industry policy, which also has two levels of meanings: the policy for the design industry and designing industrial policy. Frankly, among the limited Chinese literature, the former almost has taken all the percentage, while the latter is seriously underdeveloped. A similar phenomenon is witnessed in the

international research community; however, this situation may change in the following decades worldwide because a "school" that concentrates on the latter emerged, and they put forward a theory called "design governance". Matthew Carmona is one of the leading figures in this school. Along with his colleagues, he introduced informal governance tools based on the summarising of CABE (Commission for Architecture and the Built Environment) experiments in the UK to enrich the governance tools for the design industry [42]. However, Chinese design scholars recently developed his theory and emphasised the possibilities of using informal tools to govern industries [43]. In other words, the idea of design governance has the potential to be used as a tool and approach for social design, especially for the creation of public affairs. This may transform the landscape of social design in public administration and make some scholars more confident about the future of applying social design in public sectors.

2.2.2 Materials Bibliometrics Analysis on Design

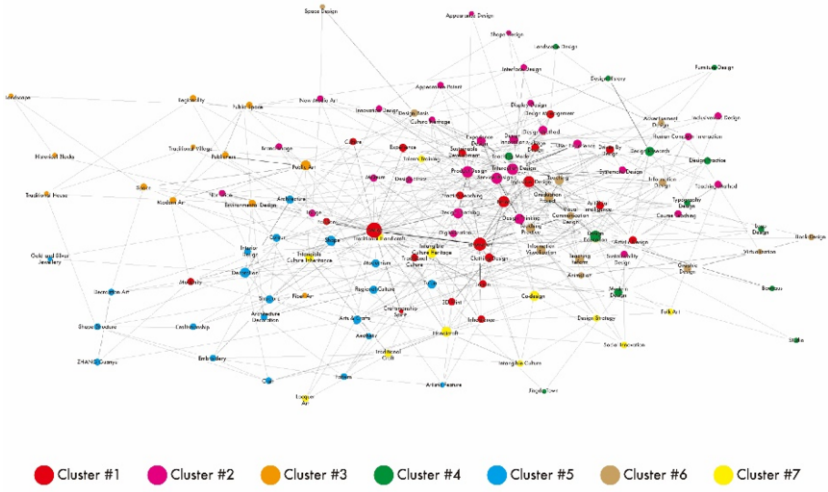

Figure 2. Keywords Co-occurrence of Design Papers Published in Design Journals

Figure 2 shows the graph with the clusters produced by the bibliometric tool. As mentioned previously, this analysis provides a comparatively objective and promising trend in the field for researchers. There are seven clusters of themes categorised by subjects of design as follows.

- *Cluster #1: Classic Modern Design*

This cluster lies in the centric of the graph and weighs heavier than other clusters. The specific keywords of this cluster are "design", "innovation", "industrial design", "brand", "fashion design", "culture", "experience", "sustainable development", "design management", and "intelligence artificial", explaining what research objectives and study themes are in design discipline generally. Traditionally, in the Chinese design discipline, "industrial design" is used as an alternative name to "product design"; however, they are different. Some scholars argue that it is better to understand industrial design as design for industry because a systematic way of thinking hides in the latter [44], through which design will get broader extensions. Nowadays, this consensus is forming; therefore, it is wiser to interpret "industrial design" as "design for the industry". Although

literally, its focus may be on the commercial, it is undeniable that it leaves some spare interfaces for the integration of industrial policy and sustainability.

- *Cluster #2: Transformed Design*

Admittedly, the keywords from Cluster #1 only present an overview of the design discipline without leaving some details for further interpretation. Cluster #2 is an essential supplement for disciplinary cognition to understand better what has happened in the design discipline. As seen from the chart, these cluster keywords disperse intensively around Cluster #1, and most of them have tight connections with the leading cluster. Found in the graph, the primary keywords considered as the extensions of the former cluster are "product design", "service design", "interaction design", "experience design", "design thinking", "systematic design", and "design ethics", "museum", "cultural heritage", "digitalisation", "HCI", "inclusiveness design", "narration", and "sustainable design". Frankly, demonstrated by the size of dots, research in these fields is highly prevalent in the Chinese design community, and two types of immaterial design, "service design" and "interaction design", even attract more attention than the material "product design". The dark line between "design thinking" and "service design" and the dot's size reveals the critical value of applying design thinking in the new design era.

- *Cluster #3: Environment Design*

At present, the main keywords of this cluster are "public space", "traditional village", "historic block", and "regionality". As indicated by the size of the dots, this research field is lighter in weight, meaning they are less critical to the design discipline. Thus, it is reasonable to conclude that this subject has handed out its rulership to "industrial design" and "product design" (Cluster #1 and Cluster #2). However, it once took the leading role in the design discipline [45]. Moreover, most of them concentrate on the top left with a long distance from the centric two clusters, indicating less relative. Despite the alienation in the space, another irrelevance is reflected in the connections of keywords' meanings. Or put differently, these keywords are far away from the core fields of design research. It seems that the investigation in environment design has encountered a research crisis. Specifically, shortage of researchers, insensitivity to the frontier, and ambiguity of vision are the main obstacles placed before the development. To cope with this problem, researchers of environment design need to change their focus and discover new potential fields. Currently, some scholars pointed out that "design for a relationship" and "design for sustainability" are the two possible fields where the researchers of this subject are skilled in contribution [46]. Additionally, although this cluster does not include "narration", it is highly related to this subject, as revealed by the lines between it and the keywords such as "public art", "space", and "interior design". Initially, "narration" is used as a trick to create an experience for public spaces like museums. Thanks to this subject's research contribution, it is now widely applied in other fields, such as product design and visual communication design.

- *Cluster #4: Design History and Theory*

Although this is an area driving the development of design research, the number of outcomes of this cluster is restricted. The limited dots scatter on the right bottom side, as the picture illustrates. The main keywords of this cluster are "design history", "design research", "design education", as well as "design practice", together with other keywords (such as "landscape design", "logo design", and "typography design"). Additionally, this cluster emphasised the unique nature of the design discipline, that is, practicalness. Therefore, design education is not only about delivering theoretical knowledge and terms

but also about ways of thinking, strategies, approaches, and tools for conducting design practices. On some occasions, predominantly in undergraduate education, the latter is always stressed, which also causes the problem that design research is of less attention, fewer outcomes, and more immaturity.

- *Cluster #5: Arts and Crafts*

"Decoration", "pattern", as well as "Chinese aesthetic" may well summarise the meanings the numerous keywords on the left bottom side try to deliver. In China, the field of "arts and crafts" has played an essential role in the development of Chinese design because, for decades, it equals the entire design discipline [47]. Although its influence may be weak today, it is undeniable that the impact will be forever lasting because decoration is a tradition and feature of Chinese culture [48]. In Chinese history, almost every decoration of artefacts has meaning, and it was also used as a cultural approach to govern the people. Since this tradition lasts for thousands of years, it has dwelled in the cultural DNA of the Chinese people. However, it began to face challenges after China lost in the Opium Wars. Then political, cultural, and economic conflicts between the west and east start to become discordant sounds in the communication across continents, which has lasted for generations until the present. These conflicts influence the construction of design discipline to a great extent. In the recent short 100 years, Chinese design has transformed at least four times: initially, the design was named "Tu'an"; then it was called "Arts and Crafts"; later, the name changed to "Arts and Design"; and finally, it is titled "Design" [49]. In this process, some scholars try to build a Chinese-styled design theory by seeking inspiration from their ancient classics. Although this attempt is undeniably essential and valuable, it reflects the cultural diffidence among the community to some extent. Probably, culture and creativity design may not be the whole landscape of a Chinese-styled design, yet, in the process of their cultural self-confidence restoration, it possibly offers an approach to fostering cultural self-confidence of the mass, and perhaps in this social context, the Chinese-styled design will be produced [50].

- *Cluster #6: Visual Communication Design*

Although graphic design is the traditional name of this cluster, to cope with the emerging challenges caused by the applications of new technologies, the name changed to "visual communication design" [51] at the meantime emphasising the core value of this subject, which is to deliver information to the audiences [52]. Undoubtedly, the main keywords are traditional objectives such as "book design", "advertisement design", and "animation", as well as new categories like "information visualisation", "information design", and "virtualisation". In addition, the keyword "design basis" is also of this cluster, indicating that this field plays a fundamental role in design. Some literature has proved this that the basic knowledge of layout design, typeface selection, and colour choice affects the formation of designers' aesthetics and even influences the potential ability of innovation [53]. As one of the most contributory subjects to cultural and creative design, the contribution history can date back to the days of souvenir design, the previous stage of cultural and creative product design [54]. Today, the designers from this major are playing the leading roles in cultural and creative product design projects in China.

- *Cluster #7: Social Design*

Frankly, it is difficult to name this cluster because literally, they belong to at least three categories: social innovation ("social innovation" itself and its methodology "co-design"), narrow-sensed arts and crafts ("intangible culture", "folk arts", "handicraft"

and “lacquerware”), and strategy for survival and inheritance (“design strategy”). However, they all belong to social design issues, and thus, it is rational to cluster and title them “social design”. As seen from the chart, these keywords disperse on the margin of the map, indicating they are not centric topics. But compared with environment design (Cluster #5), it is an area closer to the centre. Also, the size of the keyword’s dots is relatively small, and these fields’ information is either emergent or inattentive. In the chart above, “tangible culture”, “intangible culture”, and “inheritance” form a triangle. Still, the line between the latter two is darker than the other two lines, meaning that inheritance is a crucial topic for intangible culture. Also, inheritance is linked with design strategy, indicating that traditional arts and crafts preservation and inheritance strategies are highly prioritised in this field. Since intangible culture is related to a conventional scheme of technics for producing artefacts, programs for celebrating festivals, or even wisdom for treating diseases, the consensus of the best protection strategy is operating such systems in daily life rather than merely protecting the tangible tools or materials related. Service design might be an ideal choice to solve such social design issues because it will provide a way of systematic thinking and a set of practical tools to figure out a series of suitable solutions, including tangible products, immaterial services, and an integrated system.

3 Preliminary Findings from Design Literature

As mentioned above, design has transformed from material to immaterial. Following this transformation, the concept of what is museum’s cultural and creative product should be updated simultaneously. In the beginning stage of the museum cultural and creative industry, an officer of the Chinese National Culture Heritage Administration put forward a broader concept of museum cultural and creative products [55], including educational activities and semi-product-semi-service exhibitions, besides the traditional products. The educational activity is an immaterial service design without controversy from the design perspective. At the same time, the exhibition can be considered as a mixed category: for it contains some artefacts creations such as designing display boards, showcases, and lightings, it is undoubtedly to claim it as a product design; at the meantime, since it tries to improve the service quality for the public, it is also rational to be service design. However, for sustainability, traditional products and the emerging service design on operation matters are insufficient, and a system for supporting these two elements is also essential and inseparable. In design, a product, a service, and a method are integrated to form a “Product Service System (PSS)”, meaning that the attention of museum cultural and creative product design should not only be paid to the traditional products and the semi-product-semi-service exhibitions but also the supporting systems.

However, the idea of that museum officer is only an inspiration for future museum operations at that time. After ten years of operation, Liang Gong, the curator of the Nanjing Museum, published an article in a specialist newspaper after years of service, highlighting some practical suggestions for transforming the operations towards a broader sense of museum cultural and creative product [56]. Frankly, although his attempts are valuable references for other museums and some of the advice is practicable in the application, it is still deficient in a systematic design view. Specifically, in the perspective

of PSS, his concept only includes the product and the service, but the system is missing. In PSS, a system refers to a set of mechanisms that assist and support the operation of the elements. For example, a policy is one of such supporting mechanisms. Moreover, the system may have different levels of concentration: the bottom level is usually on the operation of the museum's products and services; the middle one is for establishing a sustainable developing way for the related industries in an area, for instance, the regional cultural and creative industries; the upper level refers to the national goals of cultural undertakings and industries governance. Although it is challenging, it is encouraged for museums' curators to bear in mind these different goals at all levels. Otherwise, the operation of museum cultural and creative products may not be satisfactory, and the potential for sustainable development may be restricted too. The example of the Taipei Palace Museum may be a good reference for a systematic perspective. During the golden period of its cultural and creative industry, the former curator Gongxin Zhou put forward a blueprint for the upper level. Her systematic view set her museum as the innovation driver for the Chinese culture and a promotion centre for harmonious social relationships. Thus, she specified the blueprint into a sequence of museum-collection-driven product design competitions, a series of cultural training camps, and even a construction plan of a culture and creativity industry park [57][58][59]. Thus, the design of museum cultural and creative products is not only about traditionally designing products and experience-oriented exhibitions but also about conducting service designs of building a platform for design contests, a program for education, and a sustainable development strategy in a transformed era.

4 Research Gaps Discovered for Further Inquiries

An additional step of simplifying the "chaotic" graph was carried out to discover the research gaps. *Figure 3* presents the processed results, and some essential explanations are listed as follows: the black dots are the keywords summarized from *Figure 2*; the solid black lines represent the relationship between the two keywords which can be found in the original graph; the dashed lines mean the link between the two keywords is missing or unapparent in this original, but their connections can be proven beyond this literature sample or have been widely accepted by the academic community; all the red dashed lines symbolise the ties are pretty weak, and thus there are the potential research gaps for museum culture and creativity, among which the principal gaps are marked with thick red dashed lines while the peripheral ones are in thin red dashed lines. It is easy to figure out what to study further by summarising the two ends of all dashed lines. Among all the ends, it is explicit to discover the keywords "culture", "innovation", "museum", "social innovation", and "design governance" are linked by more dashed lines comparatively, meaning they are potential objectives for further research and the connection establishment between them are also urgent.

There are four fields of research that need urgent attention, also known as the research gaps, in the landscape of museum cultural and creative product design research: (1) the relationship between culture and innovation, (2) the relationship between innovation and the museum, (3) the relationship between the museum and social innovation, and (4) the relationship between social innovation and design governance. These four research gaps are sequential museum cultural and creative product design

inquiries. The first gap is the most fundamental research area, and this field aims to answer the question of "how culture can be innovated?". Based on the answer to the first question, it is possible to push the inquiry to the second one, "how to train a person to be culturally innovative in museums?". The goal of the third gap is to find the solution to "how to design museums as places for building social relationships of the mass and driving their cultural innovation?". Finally, the last question explores "what are the supporting systems for social relationship maintenance and cultural sustainability?"

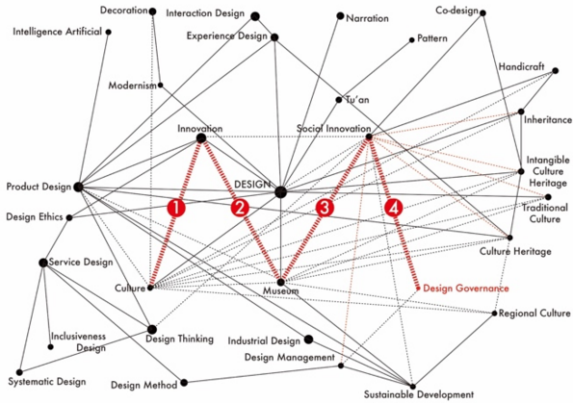

Figure 3. Potential Research Fields in Design Perspective

5 Conclusion

The paper conducted a systematic literature review and identified two major categories of design research in the context of Chinese culture: product creation in a traditional view and service design in a transformed perspective. Following the discoveries, seven themed clusters were formed by applying a bibliometrics analysis tool: classic modern design, transformed design, environment design, design history and theory, arts and crafts, visual communication design, and social design. Finally, this study highlighted four primary areas of research previously unexplored in the field of museums' culture and creativity.

Acknowledgement: Provincial Major Research of Key Projects in Humanities & Social Sciences of Zhejiang Colleges and Universities (2021QN041), Zhejiang Provincial Philosophy & Social Science Program (20NDQN322YB), Provincial Fundamental and Commonweal Research Projects of Zhejiang (LGF22G030015).

References

[1] Cheng, H. (2021). Research of User-Centred Intelligent Technology in China's Cultural and Creative Product Design. E3S Web of Conferences, 236(2), 04050.
[2] Literature Metrics. Coco: An Application for Net Science Analysis and Knowledge Graph Illustration [CP/OL]. [2022-05-10]. https://github.com/2088904822.

[3] Liu, Z. & Chen, H. (2019). Research on the Extraction and Application of Cultural Factors Based on Perception Analysis: Taking Wuhan University of Science and Technology as an Example. Zhuangshi (06),128-129.
[4] Ge, C. (2018). Analysis and Transformation of Requirement in the Design Process of Cultural Creativity Product. Zhuangshi (02),142-143.
[5] Zhang, L. (2011). Semiotics Method of Product Design. China Architecture & Building Press.
[6] Zhang, K. & Fan, Z. (2018). Generative Art and Aesthetic Measurement in Computational Aesthetics. Zhuangshi (03),47-49.
[7] Zhao, H. & Gao, J. (2018). Never Abandon the Essence: Study on Yi Nationality Pattern Innovation and Inheritance Method. Zhuangshi (09),130-131.
[8] Xu, Y. & Zhou, Z. (2019). Research on Extraction and Transliteration of Semantic Symbols in Flower-themed Tourism Commodity Design. Zhuangshi (04),38-42.
[9] Zhao, C. (2020). The Construction of Design Significance: Review of Design Psychology Research and Case Study. Zhuangshi (04),42-53.
[10] Zhang, K. & Gao, Z. (2018). Study on Design of Child Medical Products Based on Narrative Design. Zhuangshi (01),111-113.
[11] Wang, Q. (2022). Traditional Chinese Design Ideas and Design Systems in the Perspective of Technology and Creativity. Industrial & Engineering Design (02),101-106.
[12] Fang, Z. (2018). Explanation for Origin and the Influence of Phoenix Dress of She Ethnic Group. Zhuangshi (04),116-119.
[13] Wang, H. & Chen, F. (2018). Analysis of Fish Bone Crown in Song Dynasty. Zhuangshi (04),110-112.
[14] Yang, Z. (2020). Those Who Know Well Create Things, Those Who Do Well Tell Things: About the Design of Gold and Silver Jewellery in Ming Dynasty. Zhuangshi (09),20-25.
[15] Hu, P. (2018). Interpretation on the Visual Representation of the Layout of "Jing" Character Pattern on Baikuyao Female Coats. Zhuangshi (02),94-95.
[16] Yao, T. (2018). Research on the Folk Symbols' Characteristics of Chaoshan's Peach Rice Cake Mould. Zhuangshi (01),90-92.
[17] Huang, Y. (2018). Research on the Package Design of Russian Commercial Tea in the Competition Sale of Hankou Tea in Late Qing Dynasty. Zhuangshi (11),76-79.
[18] Han, R. & Zou, Y. (2018). Design Check on Physical Form of the Flower-shaped Gold and Silver Cups in Tang and Song Dynasties. Zhuangshi (02),77-79.
[19] Fang, X. (2017). Literati's World Can Store in a Pot, Most Wonderful Form is Invisible: Alienation of Mountains in Jiangnan Private Gardens in the Late Qing Dynasty. Zhuangshi (03),12-17.
[20] Shi, Y. (2020). Endless Creativity Integrated with Virtuosity and the Beauty of the Nature: The Literati's Aesthetic Practice in the Handicraft Art During the Late Ming. Zhuangshi (09),53-59.
[21] Yan, J. & Li, H. (2018). The Shape and Structure of Pray Bag in Yangzhou. Zhuangshi (11),92-95.
[22] Gu, X. (2020). Cognition and Enlightenment of Chinese Characters Arranged in Traditional Layout. Zhuangshi (04),36-41.
[23] Mei, N. (2018). Ink-stick Images System: From Fang-shih Mo-pu's Atlas Structure to Ch'eng-shih Mo-yuan's Encyclopaedic Structure. Zhuangshi (08),124-125.
[24] Zhong, F. & Manzini, E. (2021). Design for Social Innovation: A Social Systematic Perspective. Zhuangshi (12),40-46.
[25] Koskinen, I., & Hush, G. (2016). Utopian, molecular and sociological social design. International Journal of Design, 10(1), 65-71.
[26] Manzini, E. (2015). Design, When Everybody Designs: An Introduction to Design for Social Innovation. MIT press.
[27] Papanek, V. (1974). Design for the Real World: Human Ecology and Social Change. St Albans: Paladin.
[28] Zhou, B. (2011). Victor Papanek on Design Ethics and Responsibilities. Design Research (02),108-114+125.
[29] Xu, C. (2020). Innovation Solutions and Principles in Grassroots Community Governance: From the Perspective of Social Design Theory. Chongqing Social Sciences (07),110-120.
[30] Zou, J. & Liu, Z. (2019). Research on Design for Social Innovation of Low-Aged Retired Women in Cities: A Case Study of Modern Handicraft Products Design. Zhuangshi (09),110-113.
[31] Fu, J., Zhang, S. & Lu, M. (2019). Participatory Design of Art Museum for Children: A Case Study of the Oklahoma City Museum of Art. Zhuangshi (02),74-77.
[32] Brown, T. & Wyatt, J. (2010). Design Thinking for Social Innovation. Stanford Social Innovation Review, 8(1), 31.
[33] Xin, X. & Cao, J. (2018). Positioning Service Design. Packaging Engineering (18),43-49.
[34] Lou, M., Zhang, L. & Siu, K. W. M. (2021). The Use and Analysis of Cooperative Design Methods Under

the Background of Design Democratization. Zhuangshi (12),89-93.
[35] Chen, D., Cheng, L., Hummels, C., & Koskinen, I. (2016). Social Design: An Introduction. International Journal of Design, 10(1), 1-5.
[36] Shen, K. & Kuang, M. (2019). Story of Orchard City: An Interview Experiment on the Design of Orchard in Chunjing Street, Nantou Ancient City, Shenzhen. Zhuangshi (12),100-103.
[37] Ma, J. (2013). The Expanding Scope of Design and Meaning Making. Zhuangshi (12),122-124.
[38] Wang, W., Bryan-Kinns, N., & Ji, T. (2016). Using Community Engagement to Drive Co-Creation in Rural China. International Journal of Design.
[39] He, S., Zhang, J., Xiong, X. & Chen, Z. (2021). Longitudinal Drive: The Value and Method Exploration of Public Policy in the Construction of Urban Community Garden. Zhuangshi (01),96-101.
[40] Wang, S. (2020). Beyond Text: Setbacks of Design Policy in U.S. and Reorganization of Design Roles. Zhuangshi (08),23-27.
[41] Xu, P. (2020). One Hundred Years of Return Journey: Description of "Design" in Sun Yat-sen's the International Development of China. Zhuangshi (04),54-59.
[42] Carmona, M., Magalhães, C., & Natarajan, L. (2017). Design Governance: The CABE experiment. New York, NY: Routledge.
[43] Zou Q. (2021). Understanding Design Governance: Concept, System and Strategy: Research Series of the Basic Problems of Design Governance Research. (eds.) The Proceeding of Chinese Design Theory and Strategies for National Development: the 5th Forum on Chinese Design Theory and Chinese Craftsmanship Cultivation (pp.16-34).
[44] Liu, G. (2017). Design and National Strategy. Science & Technology Review (22),15-18.
[45] Zheng, S. (2019). 60 years of Research on Environmental Design in China. Zhuangshi (10),12-19.
[46] Lou, Y. (2017). New Environmental Design in the Global Knowledge Internet Time. Journal of Nanjing Arts Institute (Fine Arts & Design) (01),3-9+224.
[47] Fang, X. (2018). Practice Guide, Research Drive: How Does Design Study Establish Its Own Disciplinary Paradigm. Zhuangshi (09),12-18.
[48] Fang, X. (2009). Translation of Zhuangshi. Zhuangshi (12),23-24.
[49] Yang, J. (2021). Research Path and Logic of Design History in New China (1956-2020). Industrial & Engineering Design (05),7-14.
[50] Huang, Z. (2013). Subject Consciousness and Cultural Awareness of Chinese Design. Art Observation (02),12-14.
[51] Li, D. (2020). Changed and Unchanged: The Transformation of Knowledge Structure from Graphic Design to Visual Communication. Art Panorama (12),98-99.
[52] He, J. & Wang, Y. (2019). Graphic, Sense, Media, and Communication, Fusion of Arts and Science: New Horizon of Visual Communication Design Research. Zhuangshi (10),20-23.
[53] Zhu, S. (2021). Not Only the Chinese Feel, But Also the Chinese Taste. Art Observation (02),16-17.
[54] Cheng, H. (2018). Literature Review of "Cultural Creative Product" Research (I). Industrial Design (02),29-30.
[55] Museum Department of National Cultural Heritage Administration. (2007). Review on the Conference of "Museum Cultural Products". Weekly of China's Cultural Relics. 2007-10-26(006).
[56] Gong, L. (2017). Understanding the Development of Museum Cultural Products Accurately. Weekly of China's Cultural Relics. 2017-09-26(005).
[57] Zhou, G. (2010). National Palace Museum and its Cultural Creative Industry. Bimonthly of Study and Evaluation (1),77-81.
[58] Zhou, G. & Gong, L. (2010). Education, Service, Diversified Development: An Interview with Curator Zhou Gongxin. Southeast Culture (03),13-17.
[59] Zhou, G. (2012). The Development of Cultural and Creative Industry of National Palace Museum: The Strategies of Cultural Creative Development Workshop Operation. Bimonthly of Research and Assessment (1),84-89.