A Methodological Reflection: Deconstructing Cultural Elements for Enhancing Cross-cultural Appreciation of Chinese Intangible Cultural Heritage

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Abstract. This paper presents a practical method of deconstructing cultural elements based on the Human Computer Interaction (HCI) perspective to enhance cross-cultural appreciation of Chinese Intangible Cultural Heritage (ICH). The author pioneered this approach during conducting two case studies as a means to enhance appreciation and engagement with Chinese ICH, such as the extraction of elements from traditional Chinese painting and puppetry with potential to support cross-cultural appreciation, as well as the establishment of an elements archive. Through integrating a series of HCI research methods, this approach provides a specific foundational framework that assists non-Chinese people to better understand the cultural significance of Chinese ICH.

Keywords: Digital Cultural Heritage, Research through Design (RtD), Design Ethnography, Experience-centred Design (ECD), Co-design.

1 Introduction

In recent years, the exhibition of intangible cultural heritage (ICH) has attracted increased attention from pertinent organisations [1]; at the same time, however, globalisation and modernisation threaten the safeguarding and development of various aspects of ICH, such as cultural customs, practises, artistic expression, and knowledge. There are plenty of Chinese ICH areas, such as traditional handicraft skills, folk acrobatics, minority music and dance, and sacrificial activities, which are becoming endangered. The Chinese government and academics have stepped up efforts to safeguard ICH [2], but despite these attempts, many cultural practices are in danger of being lost or forgotten. On the other hand, in an increasingly internationalised world, exposure to 'international' art forms is becoming common, and there is broad interest in maintaining such creative practices, which might otherwise die out. Compared to the practice of Chinese ICH, the aesthetic appreciation is a more appropriate approach to engage audiences with Chinese ICH in their initial experience and potentially attract their interests to Chinese ICH itself [3, 4].

However, for foreign audiences, cultural differences bring about specific challenges for the appreciation of Chinese ICH. Therefore, this paper reviews some

methodological considerations from two designed interactive applications (one application explored Chinese painting, the other Chinese puppetry) that supported cross-cultural audiences' appreciation of Intangible Cultural Heritage (ICH). Throughout two case studies, the author adopted a practical method of deconstructing cultural elements based on the Human Computer Interaction (HCI) perspective to enhance cross-cultural appreciation of Chinese ICH. This approach integrates aesthetics, anthropology, psychology, and other related areas.

In the first case study, the author conducted a cultural appreciation undertaken by qualitative and quantitative fieldwork to classify colours and subjects and expanded the content of each category to explore the available transferable design components for the design study. Then the author designed a mobile application incorporating the elements archive with multi-touch engagement to support cross-cultural appreciation of traditional Chinese painting. Based on the user experience study, which was inspired by experience-centred design (ECD) [5], the author relied on contrastive workshops and in-depth interviews of focus groups to consider the design suggestions and comments from the evaluation. The findings illustrated that the elements archive combines with multi-touch gestural engagement to effectively help application users analyse the meaning of colours and themes in order to express their understanding of Chinese painting. As well as this, they actively explored relevant knowledge through discussions with other users or searched for information online, including the artists' background story, related Chinese history, and material on Chinese religions.

In the second case study, the author adopted an approach that utilises design ethnography [6, 7] and co-design [8, 9] to conduct fieldwork with Chinese puppetry professionals, learners, and amateurs. The author gained insight into the barriers between puppetry performance and cross-cultural audiences; different languages or dialects were identified as the main obstacles to understanding [10, 11, 12, 13]. Then, the author designed and developed an interactive system called the Digital Gesture Library, which uses a three-perspective archive of puppetry gestures and a tangible interface to support cross-cultural audiences. Through this interactive system, the author employed a mixture of questionnaires, focus groups, and workshops to promote reflection on certain aspects of audience members' experiences.

These two studies posit a series of fundamental design strategies addressing revealed hindrances to the cross-cultural appreciation of Chinese painting and puppetry. First, integrating the colours and themes of Chinese painting as design elements could help non-Chinese viewers develop a more reasonable knowledge of them and ability to appreciate them. Moreover, colours – being a component of a non-Chinese viewer's appreciation approach – would not conflict with their inability to comprehend the genres [3, 14]. Second, for the appreciation of puppetry, digital design may be used as a tool to integrate gestural resources that support audiences in forming a more systematic understanding of puppetry. Furthermore, showing audiences different gestures or movements from various visual dimensions could help viewers from distinct cultural backgrounds accurately interpret puppets' gestures.

2 Methodology Review

2.1 Research Methods in Heritage Studies

In this section the author discusses the methods that have been traditionally used in heritage studies. Since the 1980s, heritage studies have become a well-defined, independent research area [15]. Text analysis and archival research are frequently used techniques to grasp the essence of past occurrences and to trace the changing meanings of heritage [16]. In particular, they are used to analyse relevant historical records and archives to aid the introduction of traditional Chinese painting and puppetry and foster cultural and aesthetic appreciation of these art forms among cross-cultural interviewees; in this research, these methods were also used in the fieldwork, to analyse the data from the interviews with professionals and stakeholders.

The research focus of ICH has transferred from specific cultural products to excavating the wealth of knowledge and skills held by artists and local communities [17]. Some scholars have adopted investigative techniques from other realms, such as sociology, psychology, art and anthropology, to support their research on ICH. Ethnography is a primary social–anthropological approach that is frequently employed in combination with in-depth interviews, workshops, or other techniques to examine the significance of traditional ICH [18]. Some scholars believe that ethnography is the study of heritage [19]. For this research, the purpose of ethnography is to grasp the artists' point of view and vision of their world [20], as well as to help the author understand the bigger picture of traditional ICH. Specifically, the author used ethnography in the fieldwork to gain familiarity with the performance of traditional Chinese puppetry, as well as to become involved with the puppetry lectures and the performing experiences outside China of professionals and stakeholders.

2.2 Research Method in Case Studies

This section provides a detailed description of the methodologies adopted in the two case studies, which includes research through design (RtD) to form the theoretical basis; aesthetic experience approaches and design ethnography for use in the fieldwork; as well as experience-centred design (ECD) for design and evaluation studies and co-design for exploring the future design studies.

Research Through Design (RtD). Research about design by engaging in that very activity has become widely recognised and utilised in the field of HCI and interaction design. Frayling [21] provided an interpretation in 'Research through Art and Design': 'research where the end product is an artefact – where the thinking is, so to speak, embodied in the artefact, where the goal is not primarily communicable knowledge in the sense of verbal communication, but in the sense of visual or iconic or imagistic communication'. In short, the process of making artefacts or designing systems should all be regarded as various outcomes of design research. From the

perspective of HCI, Zimmerman [22] and Gaver [23] identified their works as ‘research through design’ (RtD). Zimmerman, Stolterman, and Forlizzi [24] defined RtD as ‘a research approach that employs methods and processes from design practice [sic] as a legitimate method of inquiry’.

This research utilises this approach to conduct a series of practise-led case studies in order to comprehend how cross-cultural viewers/audiences engage with ICH. As an overarching technique, RtD pursues several ends within this research. Fundamentally, RtD offers a mode of generative inquiry: to conduct heuristic work; to review existing research with a critical eye; and to seek the possibilities and design insights of the cross-cultural appreciation of Chinese ICH. Furthermore, RtD provides an efficient theoretical foundation and framework for linking various research methods in a coherent manner in order to contribute to research questions.

Approaches for Aesthetic Experience. The research adopts a series of methods as a theoretical foundation to understand the viewers’ aesthetic appreciation and experience of traditional Chinese painting, as well as to reflect the content of the workshop and questionnaire. Based on the interviews with museum professionals and other relevant stakeholders on their thoughts about aesthetic occurrences, Csikszentmihalyi developed the theory of optimal experience, also known as ‘flow’ experience, which integrates knowledge, memory, emotion, sensation, and perception [25]. Csikszentmihalyi developed questionnaires based on his four dimensions of the aesthetic experience through open-ended discussion with professionals and stakeholders. He also emphasised that subjective interpretation is key in understanding the aesthetic experience, explaining that art museum visitors (for example) have more expectations in terms of opportunities to embed their personal thoughts or emotions into the artwork, however, such expectations also entail that visitors themselves need to have a greater understanding of cultural and historical context, which should be presented to them. Lankford [26] commented that flow experience stresses holistic engagement and thus is more suitable for a global cultural experience. In the study on cultural appreciation, the author adopted Beardsley’s five criteria [27] and flow experience [28] as theoretical references to design the workshop and questionnaire.

Design Ethnography. Unlike traditional ethnography, design ethnography integrates design and ethnography to form a specific method that transfers users’ perceptions into design insights. As Genzuk [29] explains, ‘the key aspect of adopting ethnographic practice in design is to ultimately understand more of the user’s perception of the object, environment, system, or service the user is engaged with’. The timescale of design ethnography is normally limited to only a few days (or an even shorter period of time). Traditional ethnographers more intend to engage with societies and become a part of them; meanwhile, design ethnographers are more focused on observing and interviewing people from outside. Design ethnography does not require researchers to collect and build an enormous dataset, but only to create a ‘just enough’ analysis to test risky assumptions [19].

Blomberg [30] suggests that actively participating in fieldwork will help designers formulate an explicit goal for the design process that will make users' behaviour and experiences more relevant to the design itself. Blomberg also states that designers should bring their knowledge of design strategies and methods to collaboration within fieldwork: 'User partnership in developing and evaluating the technology in relation to current and imagined work activities should be aided by designer participation'. In addition, the understanding and findings of design ethnography can potentially be reflected in design artefacts even if they cannot be embodied in written statements.
In the second study (Puppetry), the author employs design ethnography to collects data from traditional puppetry professionals and stakeholders to explore the design concepts and insights that may support cross-cultural appreciation of the art form. The author also adopted this method for collecting the puppetry gestures that supported the non-Chinese audience's cross-cultural appreciation of the art forms. Furthermore, this research uses design ethnography to carry out in-depth observations and understand the user experience of digital applications in the design study and the user study.

Experience-Centred Design (ECD). The author adopted ECD, developed by Wright and McCarthy [5], to conduct the design study for two case studies. This method helped obtain deep and targeted understanding of the audiences'/viewers' user experience from the angle of ICH. The design process, which is supported by interactive technology, is used as a tool to comprehend how these viewers engage with traditional Chinese heritage—the main principle for this research. This entails the need for a technique to aid in capturing and analysing audiences'/viewers' experience and putting the findings into practise.

Wright and McCarthy believe that understanding users' experiences requires not only designers' observations but also their involvement, values, and sensibilities. Kearney [31] argues that 'when the events of our lives, our experiences, are transformed into story … we become agents of our history'. Wright and McCarthy [5] explain several other frequently used methods that are employed in ECD. For instance, cultural probes are a strategy for experimental design to explore people's lives, cultural environments, and technology [32]. The experience prototype helps designers understand, explore, and communicate with the product, space, or system of the prototype [33]. It can also engage users and designers to experience the application directly, which potentially avoids forming the indirect user experience (e.g. hearing about or seeing somebody else's experience of it). Fictional inquiry uses shared narratives to create fictional settings, artefacts, and circumstances [34], as do drama and role-play [35] and technology biographies [36].

In the two case studies, storytelling and cultural probes are adopted to help cross-cultural viewers/audiences integrate experience from their personal lives, cultural context, aesthetic habitus and feelings to describe the challenges of appreciating traditional Chinese heritage, in preference to just developing abstract descriptions to summarise their experience. This gave the author a needed opportunity to delve into cross-cultural appreciation and determine the reasons for the challenges. Furthermore, drawing on ethnographic tools (such as participant observation, interviews, and video-

recording), the experience prototype and fictional inquiry are both used to engage traditional heritage stakeholders in the design phase and elicit their perspectives for the evaluation of the interactive applications.

Co-design. Co-design has been employed in various realms of human–computer interaction, in digital heritage studies, co-design is often applied by designers to enhance museum visiting experiences based on reflections emerging from participatory development of interaction concepts and prototypes with cultural heritage professionals [8]. Co-design also carries a wide range of resources around shared cultural, historical, and thematic interests to contribute ideas and offer creative input [9]. In general, co-design is used to form and assess prototypes, systems, and services; it may involve the opinions of users, designers and stakeholders, applying them to improve the accessibility and usability of digital applications. The key point of co-design is to focus on identifying common values and gather feedback (rather than pursue agendas and solutions) [37].

In the case study of traditional Chinese puppetry, the author's responsibility as designer was to participate in, organise, and facilitate a series of co-design activities with professional puppeteers and puppetry stakeholders. The co-design activities are interspersed into the puppetry fieldwork. As a participant and organiser, the author engaged and conducted a series of co-design activities with Chinese and European puppetry professionals and researchers in the UK and China. The author used this interspersed approach as the author believed that the special features of Chinese puppetry performance could help the author easily to follow the perspectives of the professionals and probe the subtle design details of their communication and interactions during the co-design activities.

3 Reflection

First, the author analysed traditional literature and traditional cultural materials such as performance repertoire to become familiar with certain forms of ICH. During this step, the author employed text analysis and archival research as the two main strategies to grasp the historical origin, background knowledge, subject classification, and other information related to aesthetics literature on traditional Chinese painting and puppetry. Second, the author conducted a series of investigation-based activities with potential cross-cultural audiences and amateurs to explore how they appreciate Chinese painting and puppetry, as well as the barriers they face. The author intended to extract the cultural elements from the first step and gather elements that would be easier for cross-cultural audiences to understand. Third, the author carried out a series of fieldwork activities with ICH stakeholders and professionals. Fieldwork is commonly used to research a specific event or population in anthropology, psychology, and HCI. During this step, the author utilised fieldwork to achieve three main goals:

(1) Classify the components of Chinese painting and puppetry based on suggestions from stakeholders and professionals in order to explore representative elements;
(2) Reflect upon the findings from the investigation-based activities (which were conducted with potential cross-cultural audiences and amateurs) to the stakeholders and professionals. Then integrate and summarise the constructive design strategies derived from the stakeholders and professionals' suggestions;
(3) Discuss and select elements that could deepen cross-cultural audiences' understanding of aesthetic meaning.
Through these three steps, the author deconstructed Chinese painting and puppetry based on the criterion of cross-cultural appreciation, and applied the results to the elements archive in order to integrate into its interactive techniques using digital devices. These three steps also provide a template that can be adapted to other kinds of ICH. Although this approach refers to other research methods, such as participation design and co-design in HCI, the deconstruction of cultural elements offers not only a design strategy but one that incorporates multidisciplinary research techniques to deconstruct ICH. This method is centred on exploring the theoretical foundations of a design strategy; in other words, it requires the designer and researcher to take on an additional role as aesthetic researchers throughout the entire design project. The figure shows each step of the method of deconstructing cultural elements (see Fig. 1).

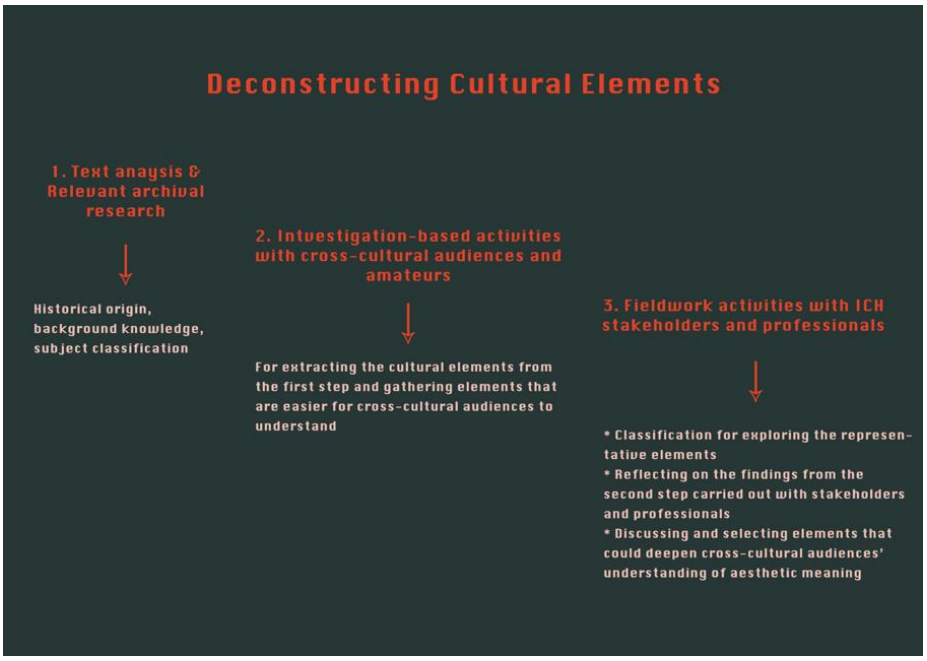

Fig. 1. Steps of the method for deconstructing cultural elements.

Furthermore, the author's role transformations as a researcher are tremendously critical in the process of elemental deconstruction. Based on the theoretical

framework of RtD, the author conducted at least four role transformations and role advancements within this research: 1. layman; 2. cross-cultural viewers/audiences and amateurs; 3. reflective thinker and coordinator; and 4. designer. Each role change provided a variety of research aims and achievement of specific research targets. For most of the researchers in digital cultural heritage, it is productive to be a layman-researcher of ICH to spend more time immersed in external literature, and as a beginner, to get familiar to a specific area of ICH. In these case studies research, the author adopted analysing the traditional literature with plenty ethnography experience of ICH, in order to support the author to finish the role of 'layman of ICH'. While implementing the investigation with cross-cultural viewers/audiences and amateurs, the author's role as a researcher grew from 'layman' to 'potential cross-cultural viewer of traditional Chinese painting and audience of traditional Chinese puppetry'. This role transformation potentially engages the author so that the author may experiences how to appreciate ICH from the perspective of cross-cultural viewers/audiences and amateurs. It is worth mentioning that this role also helped the author (as a Chinese person) to abandon the conventional understanding of traditional Chinese cultures. More importantly, this role also helps the author to perceiving the barriers in their appreciation, as well as their habitual appreciation methods.

The next role transformation is from 'cross-cultural viewers/audiences and amateurs' to 'reflective thinker and coordinator'. This role also offered a directive strategy for conducting the fieldwork with professionals and stakeholders of Chinese ICH. By directly collaborating with professionals and stakeholders, the author might obtain a more professional and accurate element deconstruction, as well as avoid the oversimplified ICH to a certain extent. However, as a reflective thinker and coordinator, it is extremely significant to reflect the barriers of cross-cultural appreciation with professionals and stakeholders and engage in a discussion with them. More specifically, as the 'reflective thinker and coordinator', the author also has the opportunity to be more practically involved with the barriers of cross-cultural appreciation as an aspect to be considered in the deconstructing of cultural elements. As a representative of a cross-cultural viewer/audience, the author could now understand the deconstruction of elements, and could therefore communicate with professionals and stakeholders to adjust the acceptability of cultural elements.

The last role transformation is the author as a 'designer' to explore the potential design strategies and techniques based on the frameworks of element deconstruction. In this role, the author as the designer of this research would still be affected by subjective and individual understandings of traditional Chinese painting and puppetry, however, the previous roles with a series of relevant activities, fundamentally offered the author opportunities to explore how to design the interactive technology to support the appreciation of ICH from a cross-cultural perspective, which also avoids the esoteric or oversimplification of cultural elements.

4 Conclusion

The safeguarding of ICH requires sustained efforts. As such, this entire research not only focuses on the evaluation and iterative design of interactive applications. Supported by the theoretical framework of RtD, this research is also dedicated to constantly enhancing the cross-cultural appreciation of ICH with the support of interactive technology. This research does not intend to directly design interactive technology to safeguard ICH. Compared to the protection of tangible cultural heritage (TCH), promotion, enhancement and transmission are more significant for safeguarding ICH and for understanding how to appreciate it. Deconstructing cultural elements based on the HCI perspective provides potential sustainability for safeguarding ICH, as well as avoiding the threat that interactive technology might simplify the original forms of ICH. Although the author adopted a low-cost design strategy instead of creating complex interactive technology, users' appreciation of the application was still enhanced effectively. This research does not stop here. For example, based on deconstructing cultural elements, the author may wish to draw from sustainable research to inform the curatorial practises of other ICH, or to foster RtD-based discussions on concerns surrounding cross-cultural appreciation.

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