
SIGCHI: Enabling Context for Traditional Chinese Paintings with “Rice Paper”

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Abstract

Chinese paintings are deeply rooted in cultural context. The problem is that, outside of Chinese culture, the uniqueness, the meaning and the value of these paintings is largely lost. Our design, titled “Rice Paper”, helps bridge the cultural disconnect between the creators of traditional Chinese paintings, *guohua*, and non-Chinese viewers. It leverages an iPad application to facilitate the sharing of large quantities of artistic context for traditional Chinese paintings in the form of tangible, printed booklets, making the cultural context that breathes life into a Chinese painting more accessible to a wider audience.

Author Keywords

Interaction design; information architecture; participatory design/cooperative design; user and cognitive models; cultural heritage

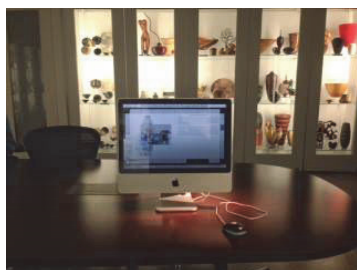
ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

Introduction

Art is deeply rooted in the context of its creation, and understanding the context of a piece of artwork, including but not limited to information about the artist, the time period, the style, the story/motifs, the composition, and the provenance may promote

Figure 1. Materials used in museums to present Chinese painting to a non-Chinese audience.



aesthetic experience[1] and facilitate aesthetic appreciation.[2] This is particularly true for traditional Chinese paintings, *guohua*, which place great emphasis on hidden meaning, and in which an understanding of this meaning plays a crucial role in aesthetic appreciation.

The subject matter of Chinese paintings “is restricted to well-established, even hackneyed, themes in the natural world, with the result that it often needs the inscription to tell us just what the artist had in mind...”[3] The reason for this, in words attributed to Bada Shanren, a prominent traditional Chinese painter from the Ming dynasty, is that “the essence of art should not be judged by likeness to an object, but by the emotions and intelligence the art embodies”. [4] Bada Shanren was said to have rendered his subjects in such a way that “the hidden messages contained in them are difficult even for Chinese connoisseurs to fathom”. [5] This is true for traditional Chinese paintings as a whole, which are closely connected to Chinese Taoism, and to a lesser degree, to Confucianism: [6]

“For the purpose of interpreting Chinese landscape paintings, we will certainly go astray if we do not try to see with the eyes of the Taoist sages... There are modes of melancholy, nostalgia, irony, and humor in Chinese art that the Western observer may not fully grasp. There are many values conveyed by various kinds of brush-stroke. One could never hope to cover the whole sign-system in any brief treatment.”

Given this complex symbolization, traditional Chinese painting requires the accompaniment of an especially large amount of artistic context in order to facilitate aesthetic appreciation. Therefore, we propose a design model that technically enables the widespread creation and distribution of context-rich tangible experiences to accompany paintings. While our proposed model is generally applicable to any type of art, we have chosen

to focus on an example of extreme disconnect between artists and viewers, namely, the disconnect between traditional Chinese painting artists or art experts and non-Chinese viewers.

Related Work

In their role as intermediaries between artists and viewing of art, museums have traditionally leveraged exhibit labels to provide artistic context, and are actively exploring ways to better facilitate user engagement with this context (Figure 1). A prime example of these initiatives is the Cleveland Institute of Art’s “ArtLens”, which leverages a mobile application to provide on-demand supplemental information by scanning individual artworks during the in-gallery viewing experience. [7] Among other features, the iOS/Android application utilizes image recognition software to recognize pieces of artwork and offer access to additional interpretive content, and also facilitates discovery of artworks with expanded interpretive content via indoor wayfinding technology.

Certain context-enabling initiatives have focused specifically on in-museum hands-on user engagement with Chinese paintings. For example, Hsieh et al. developed a tabletop system to create an interactive viewing experience for Chinese paintings. This system employs gestures to click, magnify and drag items. When a user drags an artwork into the central region of the table, its metadata such as name, artist, and era appears at the top of the painting, and the system also supports translation of calligraphic text.

Largely due to cost, these museum-created initiatives often touch only a few select works (relative to the total number of existing works). The small number of included works not only limits the number of connections made between artists and viewers, but also causes a loss of the multiplicative and comparative benefits of presenting fuller collections of works from a specific culture and style. Furthermore, traditional

Figure 2. Participant interviews at The Chicago Institute of Art “Beyond Beauty: Botanical Motifs and Metaphors in Late Imperial China” exhibit in Nov. 2014 (top) and UMMA (middle). Affinity wall (bottom).



Chinese paintings were intended to be viewed in close proximity, often in the form of a fan, handheld scroll or furniture inlay[8], and a defining characteristic of these paintings is the texture of the rice paper. The semantic understanding of these paintings is often lost in digital translation. For these reasons, we felt strongly that the design described in this paper should be something tangible, something made of rice paper that you can hold in your hand.

Research

Markussen et al. define cultural frame shifting as a phenomenon in “which people, through their explorative use of technology, are required imaginatively to reorganize their cultural background knowledge and expectations.” Here the frame is the cultural background knowledge and beliefs that people unconsciously draw upon when using language and thinking and acting in the world. They argue that, for cross-cultural interaction design, in order to create a conceptual blend of the two cultures, one must gain exact knowledge about how people “construct meaning as they talk, think, and act...”[9]

Drawing from this body of work, for our research, we first interviewed a Singapore-based amateur Chinese painter, Sunandar Amin, who expressed that he generally shared his paintings only with a Chinese-speaking audience. This interview also made clear that contemporary artists use technology such as the iPad and YouTube, and that there is a lack of tools and services that help lesser-known artists share their work with a wider audience.

In order to better understand how Chinese paintings are currently viewed, we conducted participant

¹ Interview at the University of Michigan Museum of Art, October 17, 2014

observations at the University of Michigan Museum of Art (UMMA) and The Chicago Institute of Art, which had a special exhibit through November 2014 titled “Beyond Beauty: Botanical Motifs and Metaphors in Late Imperial China” (Figure 2). In these observations, we found that many visitors were frustrated with their ability to relate to traditional Chinese paintings. When asked their thoughts on Chinese paintings, one replied, “This may be a stereotype, but it is too different, too far away from me. I need something more personal.”¹ Furthermore, we also observed that the majority of visitors in the Chinese painting exhibits had prior interest in the subject and/or an art-related occupation. This suggested that, in order to reach a wider audience, we had to target users outside the museum.

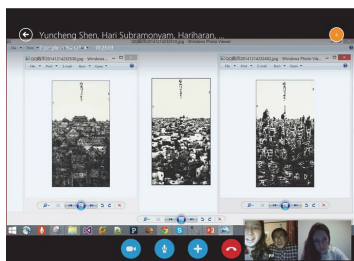
As a next step, we conducted both in-person and email based interviews with professionals working in the related fields, including Ingrid Fischer-Schreiber (a China-based freelance translator focused on digital culture & new media art), Lewis (a China-based dealer in Chinese paintings), Paul (a New York-based professional working with Asian Art auctions), Song She (an assistant Professor of the Shanghai Normal University School of Art), John Turner (Senior Manager of Museum Technology at the University of Michigan Museum of Art), and Nick Malzahn (masters student in the University of Michigan Museum Studies program).²

These interviews gave us a wealth of information on how to present Chinese painting to a non-Chinese audience, which we used affinity walls to consolidate (Figure 2). These interviews, backed up by a literature review, also highlighted the importance of the tangible, almost meditative experience afforded by the act of painting with ink and brush on paper. As a group, we

² Certain last names have been reserved for anonymity by the interviewees’ request.

Figure 3.

Participatory design sessions with Fan Feng, director of the Wuhan Art Museum and a prominent Chinese painter, and Carol Stepanchuk, the Outreach Coordinator at the University of Michigan Center for Chinese Studies



conducted a hands-on Chinese painting session during which we attempted to recreate a few simple motifs from *The Mustard Seed Garden Manual of Painting*, one of the preeminent instructional works for traditional Chinese painting. This session gave us first-hand experience on how the ink, water and brush interacted with the rice paper medium, and also made us aware about the complexity of creating a Chinese painting.

Based on this research, we generated several possible approaches, including the use of Google Glass, augmented reality and other projection-based solution. We had advising sessions with Professor Silvia Lindtner, whose research is in the field of Chinese maker culture, and we explored ways to incorporate concepts from the Chinese maker culture. As suggested by Markussen et al., we settled on an approach that enables artists and art experts to directly participate in the process of creating a conceptual blend of cultures. To add greater detail to our design, we held a participatory design sessions with Fan Feng, director of the Wuhan Art Museum (in Wuhan, China) and a prominent Chinese painter, and Carol Stepanchuk, the Outreach Coordinator at the University of Michigan Center for Chinese Studies (Figure 3).

For the session with Fan Feng, we chose three paintings done by Fan Feng's "Overlook" series, as well as "The Lotus" painting by Bada Shanren, and explored his approach in describing the painting, the elements that he highlighted, the vocabulary used to explain the context and the inner meaning that is encoded in the painting. This session gave us valuable input about how to create the iPad interface, what key components to include in the creation of metadata about the painting, and also the order or flow of the interface. For the sessions with Carol Stepanchuk, we discussed how

Chinese paintings are taught and the key elements of a contextual interface for appreciating such paintings.

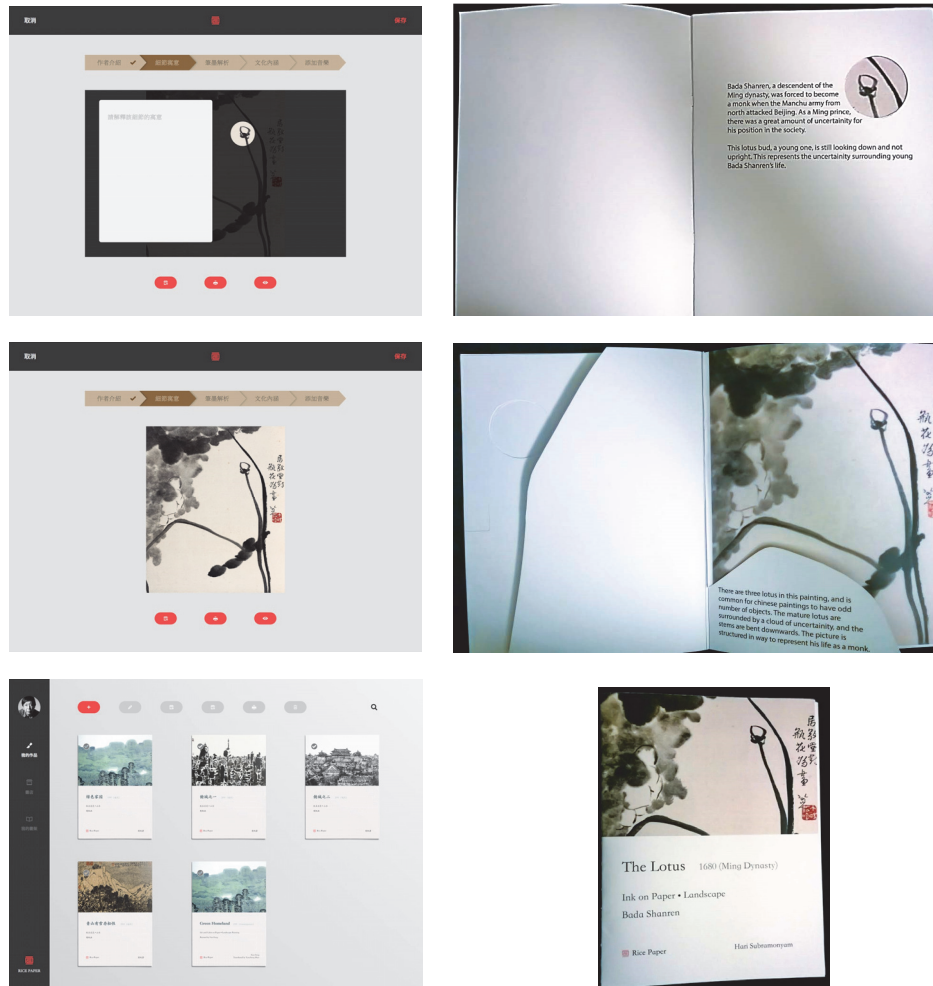
Design

We have designed "Rice Paper," a tangible booklet experience that complements a Chinese painting, and is created by a Chinese artist or expert via accompanying iPad application (Figure 4). The booklet guides the viewer through the key elements of the painting, and attaches context that is otherwise lost, providing a non-expert audience with an enriched opportunity to appreciate Chinese paintings, and enabling Chinese painting artists and experts to better reach a broader audience. To prototype this booklet, we selected a work by Bada Shanren, "The Lotus" Painting. This work demonstrates several features representative of traditional Chinese paintings, such as large empty spaces untouched by ink, partial depiction of the subject, and varying tones and density of ink.

The "Rice Paper" iPad application interface enables artists or art experts to add information about the painting's motif, the meanings of elements, the strokes, the artist's life story, and/or other contextual elements, with content translation into English done in the application by either the artist or art expert or external parties. The iPad application bookstore facilitates rapid distribution, regardless of geographic distance, as an electronic mockup of the booklet can be immediately viewed and shared, and a paper version can be sent to print on demand directly from the iPad application for what we estimate to be less than US\$25.³ The booklet's reprint of the original painting will be printed on rice paper to facilitate a tactile connection.

³ Cost estimate based on printing a 15-page moleskin book with the iPad application, Paper by 53. More information at <http://www.fiftythree.com/book>.

Figure 4.
iPad application interface and printed booklet



Discussion and Future Work

A key characteristic of this model of context information collection is that it enables an artist, if able and willing, to directly contribute information about artistic context. Traditionally, it is the artist himself or herself who has the deepest understanding of the art pieces he or she created. In his book, *Drawing Acts: Studies in Graphic Expression and Representation*, David Rosland observed that “drawing something is a complex action: it involves subject and object, perception and representation, eye and mind, and most obviously... hand and body.”[11] As the significance of the image originates in the body and mind of the image maker[12], our approach aims to provide Chinese painting artists with a medium to attach context to their work, and therefore share their stories with a wider audience. However, in circumstances in which the artist is unable or unwilling to contribute to contextual information, we have included art experts as potential users of the “Rice Paper” design.

Moving forward, we plan to evaluate and refine our design based on pilot tests in which we compare viewer understanding and aesthetic appreciation with and without the “Rice Paper” design accompaniment. We also plan to refine the application interface, including expanding on the social elements of the bookstore with ratings, comments, etc. Finally, we hope to extend the tangible element of the Rice Paper design, as our research suggests that the tangible element of Chinese painting - the brush, the ink, and the close-up viewing experience - is key to aesthetic appreciation of the art, and one to which many non-Chinese have limited exposure. There is significant potential in leveraging the Chinese maker culture to facilitate custom creation of tangible elements like the booklet described here.

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