Digital Media: Can It Preserve and Disseminate Intangible Cultural Heritage

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Abstract
Cultural heritage records human beings’ intelligence and the development of civilization. Regretfully, some of them are confronting decrease, disruption, even extinction during handing down. The emergence of digital media brings fresh hope for them. With the aid of digital media, historical heritage, pictures, music, dance, language, manuscript, cultural practices could be saved. Even though it can prevent various intangible cultures from disappearing, does it mean digital media really guarantee those forms of art could pass down from generation to generation? Take Kunqu opera as case study, this article seeks to assess the importance of digitally preserving, and analyzes its high ground and drawbacks.

Keywords
DIGITAL PRESERVATION, DIGITAL STORAGE, KUNQU OPERA, CULTURAL HERITAGE, ICH, OBsolescence

Introduction
Those who were born before the era of the Internet and digitalization cannot imagine that today people all over the world are able to appreciate cultural artifacts from the Louvre Museum in front of computer; they cannot believe cultural practices that are on the verge of disappearance can be recorded and preserved completely via digital technologies. Recently, the satisfactory current situation of material cultural properties protection by designing heritage in virtual environment enlightens human beings to apply digital media to conserve non-material cultural heritage. It seems that digital techniques could prevent immaterial cultural heritage from losing. Nevertheless, it is still worth considering the impact of digital preservation in terms of maintaining the original value of intangible cultural heritage (ICH). As Kunqu opera as case study, this article aims to explain why we preserve cultural heritage by digital media and explore both positive and passive effects of digital storage.

A large number of ICH, such as cultural practice, dance and languages is threatened. Crystal(2000) mentions that although there are 6,000 languages in the world, half of them
are likely to die in the next century. We will lose related culture as well. Language is more vulnerable to be assimilated or be influenced. Fortunately preserving languages that are used by seldom people is not difficult in digital age. And rare language is worth recording, because language has deep relationship with culture. When the number of people who speak identical language is limit, the vitality and value of the language will decrease, even die. It is necessary to save languages belongs to special groups or communities even though it has lost the importance of dissemination. Some languages themselves are cultural heritage, and are the essential mean of communication as well. Language as the tool of conveying information may have impact on the duration of cultural artifact. Even though cultural duplication is possible prevent the degradation of information it carries, once the language is going to die, the meaning of that information cannot be preserved completely. (Pozo,Nick del,et al, 2010). Besides language, there are some art forms need to be documented via advanced methods so as to pass on later generation, such as traditional music, dance, craft, etc.

Advantages

Living in modern society, we cannot stop to think about the past culture and history through researching extant material and non-material cultural heritage. Traditionally, we invest heavily on rebuilding or maintaining cultural and historic heritages. Because these are not only signify human beings' wisdom, but also the best evidence that assist us to understand the development of history. Zgonjanin describes the phenomenon that destroying one's own cultural heritage which has centuries' history in one nation as cultural suicide, because of cultural pluralism. There is no forms of culture can survive independently. Once we destroy other nation's culture, we also destroy ourselves culture at the same time. (Zgonjanin, 2005) However, the fact is that those art forms partly were recorded from generation to generation, while partly will extinct for lack of awareness of preservation or scientific methods. Cultural suicide phenomenon never stops. Kalay(2008) states that new technology is changing the practice of preservation and communication; and digital media is a new platform for conserving cultural heritage. In other words, new technologies basically could slow down the pace of the decline of cultural heritage. Digital media have “the capacity to become a tool to capture both the tangible and intangible essence of both the culture heritage and the society that created or used the sites” (Silberman,81). Digital medium, on the one hand safeguard a digital representation of heritage objects so as to break the restriction of time. On the other hand, it is the advanced technique that could present the cultural heritage in various ways. For example, through
three-dimension tools, physical cultural heritage could reappear in virtual reality. Now visitors in the “virtual room” at Melbourne museum have opportunity to experience dynamic scenes that are created by 3D technique. The multimedia database developed by Tsirliganis et al. (2004) presents archaeological ceramic and glass artifacts via digital techniques, especially 3D digital images and representations. During interactivity, users could access to artifact’s information, but also could adjust its 3D representation. Additionally, via digital methods, those damaged cultural heritage even could be restored. The Old Summer palace in China which was regarded as “palace in the moon” has almost disappeared in conflagration overnight in 150 years ago. With the aid of 3D technique, magnificent landscape is reproduced.

Limitations

On the one hand, cultural heritage dissemination and preservation depends on digital media. One effective method to disseminate and distribute cultural heritage data, such as video presentations of archaeological artifacts rely on multimedia platform. Multimedia system contributes to store, manage, distribute, receive, consume, edit and share cultural heritage information (Kanellopulos, 2011). On the other, digital preservation has limitations on both technique and cultura value aspects.

From the late 1970s onwards, paper archives have begun to convert in to digital format: text files, databases, CAD files, and so on. (Richards, 2002) “The problems surrounding the preservation of digital information include technological obsolescence. As formats, software, hardware, and storage media become obsolete, there is a risk that information becomes inaccessible and unusable. There are many others, including the ephemeral nature of much digital information. Information may change or disappear before it can be captured and preserved.” (Muir, 2004) For Anderson (2005), storage media and networks are easy to be broken due to issues of techniques, such as obsolescence, instability, or manmade disasters, such as viruses hacking, human error, even environmental impact. At the same time, the longevity of storage media is finite. For instance, hard disks will last only about five years. (Anderson, 2005) The surprising rapidity of revolution of technology makes us trust that one digital format might be displaced overnight. Nobody can guarantee that the new digital storage will be compatible with the former or ensure that the information will not lose during converting. Addison (2008) explains the difficult situation of digital record in terms of data, which involve in data overload, data reliability, and data longevity. He underpins that storing, managing and sharing data in a reliable way is tough task, even though it is not a big deal on collecting material. After all, there is no
standard could ensure the process of reproduction is accurate.

Moreover, unstable and changeable digital format easily make people lose trust on digital preservation. And in context of “seeing is believing,” people have no confidence to believe the virtual heritage completely recur the original heritage. Thus safeguarding the world finite ICH in virtual world is a complicate and unstable process.

Even the most perfect reproduction of a work of art is lacking in one element: its presence in time and space, its unique existence at the place where it happens to be. This unique existence of the work of art determined the history to which it was subject throughout the time of its existence. (Benjamin, 1992, original 1936)

Obviously, though digital devices contribute to preserve ICT, it is not omnipotent. The ICT such as traditional dance and crafts which stand for the ancient civilization and national characteristic should have pass on from generation to generation. However, in the process of digital storage, the originally cultural value of some art forms will decrease; even disappear as the time goes by. One significant feather of non-material heritage is its unrepeatable artistic value. It is difficult to identify with the artifact that shows by digital form because it is unrealistic. The fading of artistic charm might lead to the loss of viewers and learners. Consequently, the initially famous non-material cultural masterpieces might be safeguard in the digital museum, but nobody would like to come to see them.

**Case study: Kunqu opera**

Kunqu opera is one of the oldest and the most complete forms of traditional theater in China. It has been listed as one of the masterpieces of the oral and intangible heritage of humanity by UNESCO in 2001.

Kunqu, as an exquisite and traditional art form, deeps into embarrass situation since the development of popular culture. At present in China, there are only a few actors and fans of Kunqu opera have passion on practicing, appreciating and supporting it. Even though they endeavor to develop and transmit Kunqu opera both at home and abroad, it is obvious that this art form cannot be extensively accepted, especially for young generations. It is not difficult to comprehend why cultural identification to Kunqu opera is decreasing among ordinary people. It is similar to drama, Kunqu actors need to face audience directly. Thus, they cannot make any mistake during performance. In other words, Kunqu opera actors
should possess higher professional qualification on singing, dancing, acting, and chanting. In respect of expression, actors must learn the special intonation and sound. A number of words that still maintain the ancient Chinese language characteristics have discarded in modern society, which leads to incredible difficulty for actors and audiences in terms of learning and understanding. Compare with various art forms that are on the basis of popular culture, Kunqu opera is more appropriate for those who have deeply passion traditional Chinese literature and language. It means the number of audiences of Kunqu opera tends to decrease year by year.

The rapid development of globalization, the mixture of Chinese and Western culture, increase of the pace of life, and mad pursuit of material life to some degree also bring down the growth of Kunqu opera. Playwrights of Kunqu opera today lack originality. There are tremendous differences between contemporary works and classical works. Meanwhile, more than 200 classically traditional scenario of Kunqu have been lost. It is shown that recently there are just more or less 10 scenarios are performed by young actors. Another plight is that the income of common actors in the field of Kunqu is relatively low, while they need to invest some years, even more than 10 years in learning and practicing. The huge imbalance between income and endeavor cause “brain drain”. Given these factors, Kunqu is likely to be forgotten increasingly.

Chinese government and cultural agencies constantly explore effective way to preserve and disseminate Kunqu opera. Traditional methods include collecting and compiling scenarios, pictures, audios, and videos. (Zhou and Mudur, 2007) Besides these old methods, some claim that digital technology could be applied to document intangible cultural heritage. Imitating digital storage on virtual heritage, Kunqu opera could also be documented. 3D technology which is on the basis of scan people’s face poses could make animation characters’ facial expressions are exactly as same as the real characters’ behavior. Besides sound and intonation, the artistic charms of Kunqu opera should be shown through actors’ facial expression and body language. That is, successfully collecting and compiling actors’ facial poses by digital method is the key factor that realizes digital preservation. Zhou and Mudur (2007) present 3D scan-based animation techniques for Chinese opera facial expression documentation. Through scanning facial poses that created by performers and after-designing, just like Avatar, the actors of Kunqu opera would have a correspondent animation characters that could instead of them to play in the virtual world.
Because of 3D preservation, extant Kunqu opera not only could be fully and vividly conserved in digital museum, but also might appeal to more audiences. It is because ordinary people have high anticipation on 3D technique that people are likely to be interest in the product of 3D Kunqu opera. Multinational languages as subtitle could be added so as to contribute to understand the content of Kunqu opera for foreigners.

However, as the aforementioned points, in the process of transforming vibrant art form to a digital format, some artistic value is inevitably lost. Facing digital Kunqu opera, audience cannot smell fragrant rouge which only belongs to ancient Chinese makeup, and is possible to regard it as a form of cartoon rather than treasured ICH.

Conclusion

Digital storage rescues cultural heritage to large degree, and contributes to globally disseminate cultural and historical heritage. It is not only the most popular method of preservation, but is unavoidable trend in the future. But, According to Anderson(2005), “Market forces encourage change, and today’s hot technology is tomorrow’s useless doorstop.” Obsolescence of digital technique is the mishap of digital preservation. In addition, especially to ICT, digital storage, such as 3D technique, destroys original cultural value, is adverse to hand down ICT from generation to generation as well. Because core value of ICT will decrease in the process of mechanical reproduction.

References


