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 THE MAGIC OF ACHIEVING
 UNREALISTIC HEIGHTS**

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THE ROLE OF DIGITAL TECHNOLOGIES AND VIRTUAL NEW MEDIA IN THE PRESERVATION OF CULTURAL HERITAGE

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Abstract:

This paper is about the important and vital role of digital technologies and new media in the preservation of cultural heritage. Virtual heritage propagated through new technologies have strong potentially to turn people culturally aware about our absconding cultural heritage. The paper explores contemporary research in virtual cultural heritage by arguing for an enhanced user-driven approach through Digital Technologies and new-media for diffusion of knowledge. Translating the pool of data, worthy to be preserved and diffused among larger mass, into a popular paradigm like new-media and digital technologies are found more accessible by new generation and can act as an educative tool. The methods of creating of virtual cultural storages do not always allow to preserve the true reflection of memory, history and tradition the same way a real museum does and consequently, the axiological meaning of the term heritage is lost. In contrast, virtual museums and digital reconstructions of cultural artefacts help to protect and preserve information which otherwise would be lost.

Keywords: Digital Technologies, Cultural Heritage, Virtual Reconstruction, Communication, Virtual Museum

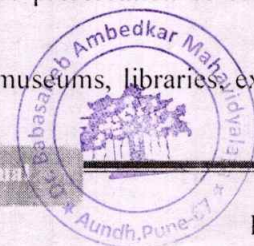
Introduction:

“Heritage” is a property, something that is inherited, passed down from previous generations. In the case of “cultural heritage,” the heritage doesn’t consist of money or property, but of culture, values and traditions. Cultural heritage implies a shared bond, our belonging to a community. It represents our history and our identity; our bond to the past, to our present, and the future. Cultural heritage often brings to mind artifacts (paintings, drawings, prints, mosaics, and sculptures), historical monuments and buildings, as well as archaeological sites. But the concept of cultural heritage is even wider than that, and has gradually grown to include all evidence of human creativity and expression: photographs, documents, books and manuscripts, and instruments, etc. either as individual objects or as collections... Cultural heritage is not only limited to material objects that we can see and touch. It also consists of immaterial elements: traditions, oral history, performing arts, social practices, traditional craftsmanship, representations, rituals, knowledge and skills transmitted from generation to generation within a community. The protection of cultural property is an old problem. One of the most frequently recurring issues in protecting cultural heritage is the difficult relationship between the interests of the individual and the community, the balance between private and public rights. The meaning of virtual technologies in the area of preservation of cultural heritage, and more specifically, of museum heritage, is widely discussed by the scientific community. Advantages and contradictions of virtual methods of preservation of cultural heritage are considered by researchers in the fields of cultural studies, museum studies, psychologists, who study the forms of perception, art historians, to transfer to electronic copies works of art stored by them. As a result, every major museum now has its own e-portal or a virtual museum in addition to the main exposition.

The main forms of digital and new media cultural heritage preservation:

There are two directions in the use of electronic technologies in the sphere of preservation of cultural heritage:

- a) E-form (electronic copies) of traditional cultural storages (such as electronic museums, libraries, exhibitions, databases, etc.)



b) Electronic forms of new cultural objects (computer programs, networks, technologies, digital works of art etc.), which may eventually become objects of cultural heritage, but according to the method of preservation are similar to the category of intangible heritage. Each of these types has its own characteristics. However, formally they are very similar and complement each other. The majority of people believe that fundamental aesthetic innovation of digital storages is based on interactivity, which is not always present in a real museum or a gallery. For the analysis of electronic characteristics of perception of reality in the sphere of interpretation and actualization of cultural heritage one should apply to another area of modern technology, actively used in the preservation of cultural heritage: 3D reconstruction (three-dimensional virtual historical reconstruction). Such computer reconstruction involve the creation of some virtual objects, giving information and visual material for exploring the history of heritage sites. It would seem that we are getting a new instrumental method for modeling historical processes or monuments through the creation of electronic simulation models.

Creative features of digital reconstructions

3D reconstruction is being developed in two directions: the creation of presentation (tourism and recreation) reconstructions, giving a consumer an approximate idea of the facilities; and research reconstruction, solving interdisciplinary tasks in the field of preservation of cultural heritage. They will not be able to replace the missing monuments, but their advantage, according to the creators, is to give to a viewer more than just the idea of an object: the ability to assess its real dimensions, to contribute to "total immersion" of the viewer into the space of the monument. Authenticity problems of cultural heritage preservation by digital means. The creators of digital reconstructions refuse to accept the fact of essential disadvantage of digital technologies - the death of authenticity. They create a special computer database software, in which "collect" electronic copies of objects with various details about styles, techniques or materials to create a simulated authenticity.

Yehuda Kalay in his book 'New Media and Cultural Heritage' divides the pedagogical attributes of new-media in cultural heritage in three attributes—

1. Management or Documentation

Being relatively cost effective digital data storage process enables us to store increased quantity of data. Probability of loss of data due to accidents is less in case of digital storage. Maintenance and conservation of cultural heritage is another important factor where digital documentation can contribute. Digital data are easy to maintain. Besides conservation if accurate digital documentation is also done simultaneously, during restoration process the documentation can help to revive the heritage accurately. A precise documentation of heritage prevents guess work during restoration process. The provision of quick search of dispersed data enables us to assemble more intelligible and more accurate narratives of our past heritage.

2. Representation Techniques

Representation possibilities of cultural heritage using virtual new media become manifold. New paradigm of cultural heritage re-presentation using digital media has the abilities of visual representation that traditional paradigm can never accomplish. Thus virtual storage can play a pivotal role in knowledge dissemination among every common people connected by digital network without implying any physical threats of original art work. While arguing in favor of digital documentation and knowledge propagation through new-media applications, Gavan McCarthy also talks about the security of data in open information system. He suggested that, instead of putting all original information on the open network, only selective data can be placed in open access public domain. So that the 'aura' of the original artwork, as depicted by Walter Benjamin, does not reduce by making virtual replicas available to large number of target audience. But the selective data will act as references,

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which will bring the target user to the original artwork and act as a catalyst for awareness generation among common people.

The beauty of the 'Patachitra' painted on the adobe façades of the 'Raghurajpur' village huts can never be the same in the digital photograph if compared with the original setup with the spatial contextual correlation.

According to Jeff Malpas, Walter Benjamin description of 'aura' (Benjamin, 1970) of original artifact and the spatio-temporal context considers the old media paradigm, as it talks about media technology of nineteen-seventies. There was a rapid change in the concept of new-media and virtual reality during past decades. Today with the technological advancements new-media has much more to offer to the field of virtual conservation and enormous feasibility to enhance the interaction experience of the user and augment the virtual narrative process. This is the right time to approach a paradigm shift towards new-media for documentation, representation and dissemination of our heritage art and craft practices before they completely die. Complete transformation into new material, tools and techniques can eventually lead to the extinction of original art form..

3. *Dissemination of Knowledge and Awareness Generation*

Representation and the selection of digital technologies and new media also influence knowledge dissemination and awareness generation as both the factors decide target audience. The understanding from virtual heritage is dependable on users' behavior and mode of interaction. Open source information has its pros and cons impacting variable interpretation. Knowledge from virtual new-media and tangible heritage has different impact. So, virtual cannot dilute originality, it can bridge the gap between heritage and common mass.

In Indian context as awareness generation should be the first step to bring the cultural heritage into larger target audience popular paradigm might be more impactful. As virtual heritage on new-media acts as an anchorage between society and heritage and minimizes the spatio-temporal gap, it may act as a campaign for awareness generation. In terms of information it can show the pick of the iceberg, but has to reach many, especially the young population, who can carry forward cultural heritage.

Multimedia applications offers an emotional connect with the user rather than passive impartation of knowledge. New media can stimulate the genesis of educative awareness generation for the narrative representation of cultural heritage. Andrea Witcomb explains that, new-media makes the process of knowledge dissemination into an object of attention by adapting a method of telling history from an innovative point of view.

Conclusion:

Genuine knowledge and genuine artifacts of cultural heritage need not to be used in actual practice, with the exception of a few scientific individuals' work. But most importantly, there will be no reason to preserve authentic remnants or ruins of historical and cultural monuments, as different digital technologies of 3D reconstruction, and digital simulations of life-size monuments will be perceived in society not only as an adequate substitute for the original, but as the only possibility to its perception. Therefore, virtual images of cultural heritage objects may prevail over their real images in our consciousness in the future. New-media application can be explore more for heritage conservation and generation of public awareness. Using new-media application technology a visual communication design can be evolved to document data, represent the cultural heritage and disseminate knowledge among larger target audience irrespective of the spatial distance between them.

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