Cultural Heritage Preservation of Traditional Indian Art through Virtual New-media

Saptarshi Kolaya* 

Abstract

Traditional art and craft, practiced by various craft-guilds in the country are the evidence of Indian cultural heritage. Though the narratives depicted in the form of painted façade or scroll-paintings are the genesis of traditional Indian visual language, the scarcity of public awareness and seclusion from the mass is becoming a threat to economic sustainability of those craft-guilds as well as cultural sustainability of our heritage. Virtual heritage propagated through new-media have strong potentiality to turn people culturally aware about our abscending cultural heritage (Cameron, & Kenderdine, 2007) and eventually bring traditional Indian art and craft into the domain of public knowledge.

The paper explores contemporary research in virtual cultural heritage by arguing for an enhanced user-driven approach through 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 is found more accessible by new generation and can act as an educative tool (Kalay, Kvan & Affleck, 2008). The young population is most effective to carry forward the cultural heritage in the long run. In this paper new-media, like game-designs and animations are explored as a contemporary paradigm for educating the selected target-user by translating the narrative visual language of Indian vernacular art-forms. The research process involves ethnographic survey to document the socio-cultural heritage. Study is duly meant for the knowledge preservation, such as method, material and the key features of the visual art-form. Possibilities and constrains of the contemporary paradigm are analyzed and extracted visual language from the traditional art-form is translated accordingly. This paper therefore addresses the methodological user-driven design exploration to preserve and propagate the cultural heritage value of Indian traditional art-forms among new generation by documentation and responsible translation of tangible traditional visual paradigm into an easily accessible contemporary virtual paradigm.

© 2016 Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

Keywords: Virtual heritage; New-media; Traditional Indian art; Knowledge preservation; Visual analysis; Paradigm shift

* Corresponding author. Tel.: +91-133228-5732; Mob.: +91-9927594737.
E-mail address: kolayfap@iitr.ac.in
1. Introduction

Indian traditional art and craft are age old practices by different craft-guilds all over India. Though they are the manifestation of cultural heritage of this country, gradual seclusion from the larger population and the craft-guilds will affect the cultural sustainability of the country. Initially many of the traditional painters were associated with social ceremony and used to paint on façade of village houses or on scrolls as part of a traditional gesture of the ceremony (Ranjan and Ranjan, 2007).

Indian artist K. G. Subramanyan, a theoretician and educator, defines Indian art practice as an eclectic mixture of different traditional art forms (Subramanyan, 1978). He further says it is an interaction and amalgamation of different cultural forms. He explains that this vast eclectic mixture not only is indicative of the modern multicultural situation but also can be an important tool in the renewal of Indian cultural heritage (Subramanyan, 1987; Richardson, 2007).

Though with the technological advancement and change of social behavior, cultural heritage of India is becoming secluded from day to day social activities of larger population, sensible technological intervention has the potentiality to rejuvenate our cultural heritage and connect the craft-guilds of rural India with the larger population. Genesis of the terminology virtual heritage conservation is a synthesis between technology and heritage, where new-media technology acts as a container for the content of traditional cultural heritage (Addison, Refsland & Stone 2006; Roussou, 2002). New-media technologies can help to disseminate cultural heritage between people making them uniformly available irrespective of spatial locations (Benjamin, 1970). But a meaningful application of new-media into virtual heritage conservation should retain the cultural presence to fulfill the pedagogic aim of conservation—knowledge dissemination and awareness generation (Pujol & Champion, 2011). This paper searches a meaningful designer intervention in Indian traditional art and craft practice to revitalize craft-guilds and rejuvenate cultural heritage awareness by adopting new-media as a tool.

Nomenclature

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Gamification: Interface design evolved from game play for enhanced user involvement</td>
</tr>
<tr>
<td>B</td>
<td>Mood-board: Collage created for design inspiration</td>
</tr>
<tr>
<td>C</td>
<td>Patachitra: Traditional scroll paintings of eastern India. Some village centres are Nayagram of Bengal (a state of India), Raghurajpur of Orissa (a state of India), etc. Artist Jamini Roy reinterpreted Patachita style.</td>
</tr>
<tr>
<td>D</td>
<td>Kalamkari: Southern Indian dye painted textile</td>
</tr>
<tr>
<td>E</td>
<td>Kaavad: Wooden shrine of Rajasthan (a state of India) designed with multiple panels, used for storytelling</td>
</tr>
<tr>
<td>F</td>
<td>Tholpavakoothu: Southern Indian shadow puppetry</td>
</tr>
<tr>
<td>G</td>
<td>Tolubommalata: Southern Indian leather puppetry</td>
</tr>
<tr>
<td>H</td>
<td>Mughal miniature painting: A indo-saracenic miniature painting of northern India</td>
</tr>
<tr>
<td>I</td>
<td>Gond: A tribe of central India famous for their vernacular art form</td>
</tr>
<tr>
<td>J</td>
<td>Madhubani: A vernacular art form of Mithila district of Bihar (a state of India)</td>
</tr>
<tr>
<td>K</td>
<td>Warli: Tribal art of Maharashtra (a state of India)</td>
</tr>
</tbody>
</table>

2. Aim of the Research

Aim of the research work focuses on preservation of Indian traditional art and craft practices by contextualizing the practice and increasing the connection with society. To diminish the seclusion of tradition from society a method of paradigm shift from traditional art form to a contemporary popular mass media is discussed in the paper. The design process focuses on the process of adapting the visual language of traditional painting into new-media in order to reach larger target audience. The aim was to establish the potentiality of virtual new-media to digitally preserve the tangible traditional paintings after transferring into new paradigm and create an avenue to preserve the vernacular craft-guilds with their socio-cultural context—the intangible cultural heritage of India. Through the research the revival of traditional art and craft and rejuvenation of the craft-guilds are aimed.
3. Crisis of Indian Craft Guilds

Due to industrialization Indian traditional art and craft are losing their potential market. As opposed to mass production, traditional craft practice creates a sustainable model of material usage and environment friendliness (Bhatt, 2007). Survival of a craft practice is mostly dependent on the economic rejuvenation of craft-guilds. Lucy Donkin says revived market can bring back artisans’ motivation to practice their occupation and refrain new generation to turn towards other occupation. This is leading to the damage of guild-system of the society of Indian artisans, which was an age-old tradition of our civilization (Coomaraswamy, 1909; Havell, 2007). Indian craft practice is intertwined with the social practices, rituals, festivals, tacit knowledge of a community and our cultural heritage (Donkin, 2001). P. Padmanabha, Registrar General of India said about Indian Census of ‘Handicraft Survey’, that the Census reveals the traditional Indian art and crafts could not be revitalized unless they were fulfilling the contemporary user needs and acknowledging contemporary technology and also tuned to social and cultural transformation (Padmanabha, 1978; Wood, 2011). For these economic crises and the loss of craft guilds our intangible cultural heritage is dying. But, cultural merchandise which has heritage value attached to them has potentiality to add economic value subjected to proper conservation and awareness generation (Mourato & Mazzanti, 2002). But there are many counter arguments whether designer’s interference to diversify the traditional art and craft to address contemporary market need will destroy the essence of the tradition and technological intervention will dilute the core essence of the craft (Sethi, Duque, & Vencatchellum, 2005).

4. New Paradigm for Preservation of Cultural Heritage

Yehuda Kalay in his book ‘New Media and Cultural Heritage’ divides the pedagogical attributes of new-media in cultural heritage in three attributes—management or documentation, representation techniques, dissemination of knowledge and awareness generation (Kalay, 2008). These attributes are discussed in the light of Indian context of traditional art and craft sector.

4.1 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.

In some cases, longevity of materials used for traditional Indian crafts less, as being painted on mud walls or organic surfaces like cotton cloths and palm leaves. During ethnographic survey it is noted that many of the painting by master artisans are in irretrievable condition due to dampness and fading of colours. A digital documentation can maintain the cultural repository.

4.2 Representation Techniques

Representation possibilities of cultural heritage using virtual new media become manifold. New techniques open up new paradigms of visual manifestation heritage art and craft. 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 favour 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 (McCarthy, 2007). So that the ‘aura’ of the original artwork (Benjamin, 1970), 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, 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. Impact of the spatial ambiance of the village cannot be completely captured by a virtual walk-through of the space. But the potentiality of digital media can be exploited to generate awareness among people and the craft-guilds of ‘Raghurajpur’ as well as ‘Nayagram’.

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 (Malpas, 2008). 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. The question is whether intervention of new paradigm will destroy ethos of the craft practice or rejuvenate them? Many design interventions in the craft sectors of India suggested product diversification to cater to the contemporary need of urban market. Many of them have started to work on completely with new materials and new tools and techniques. Collaboration of designers and artisans or craftsmen can strengthen the economy of the craft-guild, but the future of the artwork will be dependent on the sensitivity of the designer and the mode of collaboration. Complete transformation into new material, tools and techniques can eventually lead to the extinction of original art form (Sethi, Duque, & Vencatachellum, 2005). Paradigm shift of visual representation can consequently lead to new interpretations of virtual heritage.

4.3 Dissemination of Knowledge and Awareness Generation

Representation and the selection of 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’ behaviour 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 can not 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. Co-evolutionary and interactive approach of story-telling, gamified learning experience can create stronger cognitive impact among users. As virtual heritage on new-media acts as an anchorage between society and heritage and minimises 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. For these reasons animation and digital games may act well in Indian scenario.

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 (Witcomb, 2007).

According to Fiona Cameron the digital manifestation can bring cultural heritage into communities irrespective of spatial seclusion facilitating awareness generation. Being an independent creative work visual communication design, inspired from traditional cultural heritage, obtains its own aura and authenticity (Cameron, 2007).

5. Role of New-media in Virtual Heritage

New-media applications can contribute to virtual heritage preservation and social awareness generation in broadly two ways:

- Virtually simulated digital representation of cultural heritage— which falls in the domain of museological interventions.
- Visual communication design interventions, like game-designs and animations, depicting connotation of cultural heritage through narrative story-telling
Pilot study among some Indian college goers shows the comparative awareness between museological interventions and communication design intervention of new-media application on virtual heritage. Survey shows that most of the users have not visited the virtual museums on Indian traditional art and craft, some of the users came across the animated narratives based on Indian traditional folklores and mythologies propagated through new-media applications. Hence branding of the Indian stories is already more established in Indian market. Sensitive design intervention can use this market and strengthen the awareness and mental model of our cultural heritage. Whereas museological intervention is more informative, communication design intervention creates a bottom-up inductive approach of interactive story-telling process to impart knowledge about cultural heritage. According to Walter Benjamin being contextually deracinated from time and space any physical and digital replicas does not possess the ‘aura’ of the original artefact (Benjamin, 1970). This dilution of impact can be addressed by exploring the potentiality of new-media beyond documentation, replication and archiving.

<table>
<thead>
<tr>
<th>Element</th>
<th>Museological Intervention</th>
<th>Visual communication Design Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Documentation</td>
<td>Detail documentation required</td>
<td>Documentation required to analyze the socio-cultural context of art form</td>
</tr>
<tr>
<td>Design</td>
<td>Documentation can directly lead to the representation stage without any design interventions</td>
<td>Innovative and sensible design is required where artisan can form a economic and culturally sustainable collaboration with designers</td>
</tr>
<tr>
<td>representation</td>
<td>Any missing link has to be refilled based on research work rather than guessing the lost information.</td>
<td>Communication design interventions can explore the possibilities of diverse form of new-media applications blending visual depiction from traditional heritage and new paradigm of digital technology</td>
</tr>
<tr>
<td>Representation</td>
<td>Representation has to be detailed and realistic.</td>
<td>Communication design interventions can explore the possibilities of diverse form of new-media applications blending visual depiction from traditional heritage and new paradigm of digital technology</td>
</tr>
<tr>
<td>Dissemination</td>
<td>Direct knowledge dissemination. Only targets the users who are interested on the subject. Less likely to persuade uninterested people to turn culturally aware</td>
<td>Gamification and interactive story-telling can imprint cultural awareness among uninterested and can cater to larger target audience</td>
</tr>
<tr>
<td>Aura and authenticity</td>
<td>Authenticity and ‘aura’ is absent in any kind of reproduction (Benjamin, 1970), though according to Roland Barthes virtual replicas do radiate an distant aura, and create reference to heritage (Barthes, 1977)</td>
<td>As the end product is different art work by itself it does not compete with the original one. May act as a marketing communication and branding of original art form and promote cultural heritage</td>
</tr>
<tr>
<td>Cultural awareness</td>
<td>More informative and detailed knowledge distribution among common mass</td>
<td>Will act as a reference of original heritage. cultural awareness will be built as a backdrop of gamified learning experience or story-telling</td>
</tr>
<tr>
<td>Impact on original heritage</td>
<td>Whether a detailed digital replica may reduce or enhance the inquisitiveness about the original heritage is a debatable question. Availability of digital replica may create copy right issues</td>
<td>As communication design intervention explores new visual representation techniques, the original art work does not lose its mystery. Original art work acts as a visual mood-board without creating copy-right issues</td>
</tr>
</tbody>
</table>

There are few initiatives started for virtual heritage conservation in Indian context from both, museological and pure visual communication design intervention. ‘Place-Hampi project’ and ‘Google Art project’ are some example of virtual interactive museums. Though ‘Place-Hampi’, is a digital documentation, but for a better interpretation for users the project went beyond mundane digital show-case and toke the form of visual-communicative device incorporating augmented human-machine interaction. It integrates gamified learning experience with co-evolutionary story-telling by human participation in virtual new-media (Kenderdine, 2008; Kenderdine, Shaw, Favero & Brown, 2008). ‘Google Art’ on the other hand is a scrupulous documentation of museum exhibits, which includes many Indian art museums. The projects cater to larger target audiences enabling them a virtual walk-through of these museums. Being available to all internet users the project deploys the benefit of new-media by adopting a tool to disseminate knowledge irrespective of spatial boundaries. Adopting the benefits of these projects and fusing these concepts genesis of gamified co-evolutionary narrative based on a popular new-media paradigm can help the rejuvenation of Indian cultural heritage. Examples of pure visual-communication design interventions are also growing in numbers. Animated films like, ‘Girgit’ by Gitanjali Rao, ‘Sita Sings the Blues’ by Nina Paley
and children’s book design ‘Home book’ derived from traditional narrative of ‘Kaavad’ shrine by Nina Sabnani can be mentioned here (Sabnani, 2014).

This paper attempts to explore the possibilities of new-media technology to propagate Indian traditional cultural heritage of art and craft in contemporary context. A traditional art form and a popular new-media paradigm together create a genesis of new visual communication design for maximum impact of knowledge dissemination by interactive narration. This also keeps aside the arguments of authenticity and aura as being an individual creative art. In the process of paradigm shift the original art is acting as a visual inspirational ‘mood-board’ without falling into the debate of pros and cons of diversification of traditional art to cater to contemporary market. In both the cases designers and artisans collaborate. But as discussed during the need of the research, product diversification is an intervention of designers into the traditional art and craft practice; while visual communication design on new-media is the reverse, where traditional culture acts as an influencer to redefine visual language of a new paradigm of visual narrative.

6. Paradigm Shift from Traditional Art and Craft to New-Media

In this paper communication design intervention of new-media, for rejuvenation of craft and cultural heritage of India, is discussed in detail. Based on the case study analysis a methodological framework is produced to. Paradigm shift from traditional narrative art-form to contemporary new-media requires retaining the visual identity of the traditional art and also should acknowledge the attributes of the new paradigm. Here designer and artisan should collaborate and co-create to achieve a successful outcome, which becomes an object of creative art by itself. Along with Kalay’s management, representation and dissemination framework, here design for paradigm shift has to be done by a sustainable collaboration between designers and artisans.

6.1 Potentiality of Adaptation into New-media

Suitability of a traditional art-forms potentiality to be adopted into new-media is variable for different art-forms. Visual language of a traditional art style reveals the possibility of being deciphered into new-media. The potentiality of being an object of creative art in new-media from a style of a traditional visual narrative depends on some visual attributes of the original art-form. These visual analysis parameters are described in the book ‘Smart Innovation, Systems and Technologies’, volume 34 by Springer (Kolay, & Roy, 2015). These parameters are used to recognize the visual attributes which helps a traditional visual narrative to be translated into new-media applications like animation and digital games, without much visual alteration. Five visual parameters, which denote the adaptability into new-media story-telling, are:

- Recognisability of characters—
  This denotes the distinguishability of different characters of a story. Some features of the characters should be memorable and create a mental image in viewers mind. The traditional art form should have enough detailing options to let the designer to create different facial features for various characters of the story-board.
- Movement capability process of character—
  This parameter denotes whether the traditional art-form suggest a two-dimensional side-wise horizontal movement or free movement in three-dimensional space. Postures of the human figures suggest the movement possibility. Paradigm shift from traditional art style needs a sensitive decision making for selecting the additions and alterations to translate into new-media.
- Potentiality of using different camera angles—
  The traditional visual narrative should enable the characters and the objects to have the potentiality to be drawn from different angle without losing the traditional visual identity to facilitate with different viewing angles.
- Potentiality to depict contemporary elements without losing the visual identity—
  The style should facilitate with the provision of incorporating modern elements in the visual to depict a contemporary story.
- Achieving sense of depth in 2D—
Showing depth of field using Indian vernacular art is challenging as they are mostly painted using ‘Oriental Perspective’, where the farther object is placed on top of the nearer objet and does not become smaller. In these situations sense of depth can be achieved by superimposing the objects and colour contrast.

These five parameters are further redefined with the help of some examples of new-media applications derived from Indian visual narratives. Some initiatives of paradigm shifts from Indian traditional art and craft to new-media applications are discussed based on these parameters. For a lucid comprehension some traditional Indian art forms are analyzed. Final analysis is depicted in tabular format in table 2.

Recognisability of the character depends on the abstractions of the art style and the detailing. Four Indian traditional art styles and the painting of Ravi Verma are compared in Fig. 1. (Kolay & Roy, 2015). Here if we compare the character design for ‘Sita Sings the Blues’, an animated film by Nina Paley, we will see the visual language of various characters are derived from separate Indian traditional art and craft practices. The character design for main protagonists are derived from ‘Miniature painting’ of north India. These art forms are more detailed and recognizable. Different figures are easily distinguishable; whereas the three narrators of the films are depicted by the visual style of southern Indian shadow puppetry—‘Tholpavakoothu’, as shown in Fig. 2 (a) and (b). As these puppets appear black on contrast of an illuminated backdrop, colour and texture does not play any role for distinguishing the characters. Shadow puppetry is part of a narrative story telling accompanied by folk songs. Voices of people and the movements of the puppets help the audience to comprehend the story. Distinctive shift of colour scheme also differentiates them. ‘The Stitches Speak’ is an animated short film by Nina Sabnani, emerged from the visual language of women’s appliqué work common to both ‘Sindh’ region of Pakistan and India (Sabnani & Frater, 2012); reference Fig 2 (c). Recognisability of the characters is achieved only by distinguishable colour of their clothing, as appliqué work provides a rich and textured visual experience.

Movement capability of a character is a derivative of the visual style of the original art form. For example, in case of ‘Ragurajpur’ and ‘Nayagram’ ‘patachitra’, human figures have clear knee and elbows, but the artisans never paint foreshortening of body-parts. So, two dimensional animation might be applicable for these styles, where
movement is done in two by breaking the character into parts from the joints and moving them separately. ‘Tholpavakoothu’ shadow puppetry, as being designed by assembling separate body parts has a similar movement style. The same style is adopted by animator Gitanjali Rao in her animated movie ‘Girgit’; reference Fig. 3 (a). In the movie she fuses two different Indian traditional art form together to generate mythological character of God ‘Krishna’ and Goddess ‘Radha’. Visual language is derived from southern Indian dye painted textile—‘Kalamkari’, whereas movements resemble leather puppetry—‘Tolubommalata’; Fig. 3 (b) and 3 (c).

Potentiality of using different camera angles depends on the orientation of the human faces and figures (Kolay & Roy, 2015). Paintings which follow a defined syntax of orientation of faces and body parts are difficult to represent using different camera angles in animation or game designs. The depiction of human figures in some of the Indian traditional art and craft creates the uniqueness of the art form. Paradigm shift should consider the idiosyncrasy. ‘Bengal patachitra’ and Northern Indian ‘Miniature painting’ on the other hand does not follow any particular orientation of human body parts.

Table 2. Visual analysis of traditional art for paradigm shift.

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Parameters in Traditional art</th>
<th>Paradigm shift to New-media</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recognisability of characters</td>
<td>More intricacy of the visual styles like, facial features, hair style, clothing and ornaments, provides more freedom of character designing</td>
<td>Retaining the visual identity, other features can be changed</td>
</tr>
<tr>
<td>Movement capability/process of character</td>
<td>Dependent on the art style. More naturalistic art forms give more freedom of translation; working with abstract forms needs more sensitive interventions.</td>
<td>Each traditional art style has its own visual language. If a traditional painting has more 2D characteristics translating it into 3D animation might completely destroy the visual language</td>
</tr>
<tr>
<td>Potentially of using different camera angles</td>
<td>Some of the traditional Indian art form portrays human characters only either in frontal or sidewise posture</td>
<td>Exploring various camera angle for these traditional art styles is more difficult and requires sensible visualization</td>
</tr>
<tr>
<td>Potentially to depict contemporary elements without losing the visual identity</td>
<td>Many of the craft-guild of India are adopting the socio-cultural change of India. Acquaintance with modern element is also imbibed into their art practices</td>
<td>Creative visualization is required, as no reference painting might be available. Here artisans’ help should be taken</td>
</tr>
<tr>
<td>Achieving sense of depth in 2D</td>
<td>Various Indian traditional art evokes varied quality of sense of depth.</td>
<td>Traditional art with 2D features should be translated in 2D. Art forms portraying visual depth of field with shade, shadow and perspective clue should be attempted for 3D animations</td>
</tr>
</tbody>
</table>

Portraying spatial depth in ‘Mughal miniature’ might be easier than ‘Gond tribal art’ of Madhya Pradesh or women’s appliqué-work of ‘Sindh’ region. As the final outcome is an embroidered cloth original craft does not evoke depth of field, as the further objects are placed on top of the nearer objects as seen in other traditional art forms following ‘oriental perspective’. ‘The Stitches Speak’ is an example of imbibing the unique depiction of oriental perspective in two dimensional animated movies. Another way of showing visual depth is by superimposition of objects. Though appliqué work avoids superimposition because of the tools and techniques of the
work, some of other Indian traditional art and craft including ‘Gond’ uses it to provide a visual cue of depth of field.

From the case study analysis a visual analysis matrix is formed by assessing the visual shift required for a
traditional visual narrative art to adapt into contemporary new-media applications.

7. Design on New-Media Platform

To assess the local context, material-tools and techniques along with the elements and principles of design and
design philosophy ethnographic visit was conducted in ‘Raghurajpur’ and ‘Nayagram’, Fig. 4 (a), (b) and (c). Through the ethnographic survey conducted for the research it was evident that ‘Patachitra’ of ‘Raghurajpur’ village of Orissa was part of the crop-harvesting ceremony, when artisans used to paint the façade of their houses
transforming them into an auspicious space. With many research works, government schemes and the initiative of
INTACH (Indian National Trust for Art and Cultural Heritage) this place is developed as a heritage craft village of
India and developed as a model of cultural tourism (Bundgaard, 1999). But the awareness about our intangible
cultural tradition amongst the larger population of the country is yet to be achieved.

From the ethnographic understanding and case study a design ideation is evolved to fuse new-media technology
with cultural heritage. Two different animated movies, titled ‘Matsyanyaya’ and ‘Fish Tale’ are designed based on
same story-board to test previously describe five visual parameters. While the visual language of ‘Matsyanyaya’ is
derived from Indian traditional art ‘Bengal patachitra’ (Kolay & Roy, 2015), ‘Fish Tale’ is designed to capture the
essence of wood-cut print; Fig. 5 (a) and (b). The purpose of these animations was to compare the adaptability into
new-media and retaining the cultural presence. Different camera angles ware explored in the story-board,
contemporary elements, human figures and animals were designed to test the feasibility of translating traditional two
dimensional paintings into animated narratives. These two animations reveal the potentiality of successful visual
communication of ‘Bengal patachitra’ through new-media paradigm. Besides this Indian traditional visual style, an
internationally known wood-cut print style helped a comparative assessment.

In the next stage of exploration Indian young population is selected as target audience for effective pedagogic
contribution into cultural awareness. Based on the Indian visual identify a digital game—‘Wrath of Durga’ is
designed which won an award by Samsung; Fig. 7. The game acknowledges traditional and contemporary both the paradigms. Gamified learning experience and elements of design are derived from both paradigms to bridge the gap between cultural heritage and target audience. The story is evolved from a popular mythology of Goddess ‘Durga’, whereas the game play interaction is contemporary.

Iconographic depiction of ideal adult human body proportion in classical Indian art literature ‘Shilpashastra’ is six and half head high (Tagore, 1921). Though many of Indian traditional art form follows the iconography, some art form deviates. As the game was targeted for younger user groups, characters familiarity with them was required to provide much engaging user experience. Young users’ mental model of a child’s body proportion matches with a stylized version of ‘Bengal patachitra’ by painter Jamini Roy; Fig. 6 (b). The visual language of the character design is evolved from this art form. But frontal orientation of face, predominantly visible in this art style is retained in the visual design; Fig. 6 (a). By designing a female protagonist in the game a placid message against over emphasis on male domination in digital games is intended.

![Fig. 6 (a) Doodles and Character design of Wrath of Durga](source)

© Author

![Fig. 6 (b) Jamini Roy Patachitra](source)

Source: Google Art Project

Fig. 7. Screenshots from the game Wrath of Durga © Author

Like Nina Paley’s ‘Sita Sings the Blues’ here multiple Indian traditional art and craft forms are selected in mood-board from visual design inspiration; reference Fig. 2 (a) and (b). Visual cues of traditional Indian art and digital graphics both are present in background design.

Considering the preference of frontal orientation of faces of protagonist characters and simplistic movements a game play is conceived. Interaction design is derived from the common mental model of similar digital games. Mythological story of Indian Gods and Goddesses unfolds through a co-evolutionary narrative along the game play. Game design principle of increasing difficulty level as the game progress is intertwined with the mythical story of Goddess ‘Durga’.
8. Conclusion

The research process unfolds the necessity of revitalization of traditional Indian craft guilds. To bridge the gap between cultural heritage and the society a contemporary popular paradigm has to be exploited, where the target audience should be larger community, especially including the young population. As the craft guilds are in economic crisis, awareness generation and knowledge propagation becomes more decisive step in Indian context. During designer-artisan collaboration designers plays a pivotal role to control the core essence of the art form. As there are arguments and counter arguments for designers’ interventions among traditional art and craft practice the research process avoids direct intervention. An alternative option is to take inspiration from the traditional art and craft practices and design on a contemporary paradigm, without asking the artisans to iterate the traditional material, tools and techniques of the art form. This mode of intervention acts as a mode of awareness generation. Avoiding the dilemma of authenticity and aura of original art form, the new design stands on its own being a separate creative art form.

The process evokes the importance of the followings—

- Visual designer and artisan collaboration and co-creation for sustainability of craft-guilds and cultural heritage are necessary. The mode of collaboration should address the pedagogic aspects of cultural heritage preservation by educating more people while retaining the originality of the art and craft practice.
- 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. Interactive way of communication and gamified co-evolutionary learning process can be impactful for users.
- Many of the Indian traditional art form has immense potentiality to be adopted into contemporary new-media application. Visual exploration of traditional art on this contemporary paradigm is necessary for awareness building before the craft guilds fades away along with the immense treasure of our cultural heritage.

Acknowledgements

Author would like to thank Dr. Shatarupa Thakurta Roy for her contributions and advices. Acknowledged here are Patachitra artisan Prabhakar Baral and Moyna Chitrakar for their support. The successful execution of the game ‘Wrath of Dura’ has been made possible by Mayukh Chakraborty, who has programmed it.

References:


