To Explore the Imaginary Shape of Flying Apsaras in the Grottoes of the Northern Wei Dynasty

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Abstract

This research sheds insight on the evocative representations of heavenly nymphs and their deep importance in the context of Buddhism and Chinese cave art. It also investigates the fascinating realm of Apsara artistry inside the Northern Wei Caves. The Northern Wei Caves, which are located in the center of ancient China, are a testament to the dynamic interaction of many cultural and religious influences with creative traditions. Hindu and Buddhist mythology's apsaras, heavenly creatures who represent elegance, purity, and the ethereal beauty of the divine, have a place in this hallowed environment. The development of Apsara art that connected the worlds below and above was made possible in large part by the Buddhist sponsorship of these caves. The Apsara sculptures in the Northern Wei Caves, which are based on Chinese mythology and art, are an example of a fusion of cultural traditions that have been deftly translated into Chinese culture without sacrificing its spiritual core. The materials and methods used to create these heavenly nymphs provide witness to the era's skill. The Apsara art that has developed in these caverns is evidence of the constantly changing religious and cultural environment of ancient China. In conclusion, the Apsaras of the Northern Wei Caves continue to fascinate and astound tourists even now, serving as everlasting representations of creative genius, cultural fusion, and spiritual profundity.

Keywords: Apsara Artistry, Northern Wei Caves, Celestial Nymphs, Buddhism, Cave Art, Patronage.

INTRODUCTION

Hidden in barren rocks of North- ern Wei dynasty in ancient China, the seven grottos are housing a fabulous and magical realm of art masterpieces, breathed in life by Apsaras.[1] These underground halls are glazed with number of elaborate sculptures and colourful paintings that depict the art, society and religion of Northern Wei period. This research aims at disclosing the multifaceted meaning of Apsaras, specifically the art of the Northern Wei caves, which is the subject of interest in the following work.

Background

The Northern Wei Dynasty, established in the year 386 and disintegrated in 534, may well be considered the Buddhist period par excellence in China. At this point, the Northern Wei rulers embraced Buddhism as the nations' official religion and supported construction of several cave temples in the northern zones of the country. Some of the most important Buddhist art spot in the World is Longmen Grottoes and Sculptures, Yungang Grottoes And Sculptures, and Mogao Caves sculptures. Among all the caves at Northern Wei, the representation of Apsaras, the graceful and delicate heavenly ladies upon the Buddhist heaven, are the most famous. Apsaras are usually depicted as beautiful dancing and singing females who fly through the air spreading flowers, or who pick music from instruments. Such religions as Buddhism make the use of beautiful and quiet representations of paradise seen in the cave temples.[2] The Northern Wei caves' Apsara craftsmanship come from a very long Buddhist iconography extent that arrived in China with influence from China and Central Asia. However, the Northern Wei painters also produced a peculiar local style of Apsara figurines. In representing the Apsaras, they work attractive curves, beautiful gowns and hairstyles were depicted. The garment and other pursuits of the Apsaras are also another area where the painters paid much attention;[3] it is for this reason that special attention was paid to the intricate details of the jewelry and the other accessories that the painters sought to depict as new fashionable styles of the given period. In addition to the rather beautiful appearance of the Apsara at the Northern Wei cave, they also have an important role of serve God. They urge people to seek enlightenment by reminding them about the beauty of the Buddha's heaven. Also, the figures of dancing Apsara symbolize Buddhist tendencies of a compassion and donation.

Northern Wei Caves

Chinese sculpture during the Northern Wei dynasty (386–534/535 CE) of the Six Dynasties is known as Northern Wei sculpture, and it marks the emergence of Buddhism as a significant artistic influence in China.[2-4] The more conventional indigenous art produced in the south, which was governed by native Chinese dynasties, is not like the Northern Wei sculpture, which was created in the region that was quickly influenced by Buddhism and invaded and ruled by foreign invaders (Figure 1).
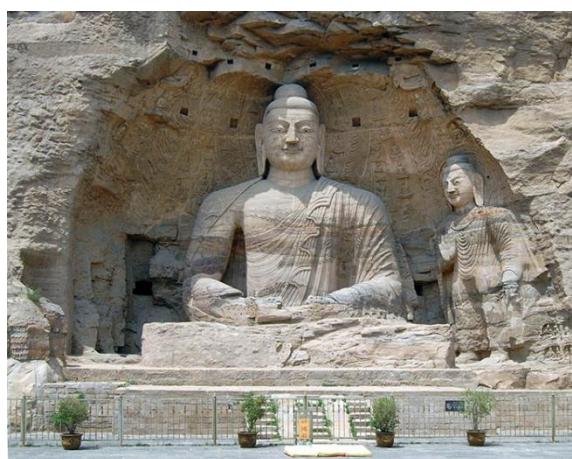
Figure 1: Statues of Buddha in Binyang cave of Northern Wei Dynasty in Longmen Grottoes - China 7 Day.

The origin of flying apsaras may be traced back to ancient mythology and religious beliefs. Within the context of Buddhist culture, the name "Tian" encompasses not only celestial abodes but also the deities that inhabit these

abodes. One such example is the "Gongde Tian," which symbolises the presence of propitious heavenly maidens. In the celestial domain, a classification of subordinate divine beings can be found, characterised by their agile movements and their role in tending to diverse affairs on behalf of the apsaras.[2-10] These celestial beings have remarkable aptitude in singing and dancing. Moreover, as the Buddha imparts his teachings, they elegantly glide through the atmosphere, accompanied by melodious music and the showering of flowers. The roots of this iconography may be traced back to two lesser deities within the Brahmanism tradition, namely Gandharvas and Apsaras. The former is often linked to the realm of music, whilst the latter is mostly characterised by its embodiment of dance (Figure 2).

Figure 2: Brahmanism - Gandharvas and Apsaras. (Cited from: History of Flying Apsaras Art: Symbolism and Significance in Cultural Heritage https://www.newhanfu.com/51719.html).

The masculine figures displayed a strong and muscular physique, while the feminine figures embodied harmonious beauty. These depictions significantly differ from the contemporary portrayal of flying apsaras (Figure 3).

Figure 3: This Sculpture Depicts a Flying Apsaras During Balhara's Era (2nd century BC) Cited from: History of Flying Apsaras Art: Symbolism and Significance in Cultural Heritage https://www.newhanfu.com/51719.html).

The Dissemination of Flying Apsaras in Ancient China

The first location visited by the flying apsaras on their journey to China was Xinjiang, which, although not being under the jurisdiction of the Han Dynasty at that period, was instead part of the Western Regions. The first representations of airborne apsaras in China are evident in the vicinity of Kizil town, situated in Baicheng County, Xinjiang, which was once a constituent of the Gaochang (Qiu Ci) Kingdom. The Kizil grottoes exhibit notable attributes of Gaochang's flying apsaras art, characterised by round facial features and muscular physical forms that clearly depict the Gaochang populace.[8-11] Nevertheless, their overall dynamic is compromised by the presence of insufficiently long drapery ribbons (Figure 3).

Figure 4: Kizil grottoes in Chinese cave art (Sonya S. Lee Recent Publications on the Art and Archaeology of Kucha, Archives of Asian Art 68, no.22 (Oct 2018): 215–232.

However, the Kizil grottoes possess notable historical importance due to their role as the origin of Chinese cave art (Fig 4). The official introduction of flying apsaras occurred during the Northern Liang dynasty in the Central Plains region. The historical periods of the Northern Liang, Northern Wei, and Western Wei were characterised by the emergence of Chinese flying apsaras art, which drew significant inspiration from models originating in the Western Regions. The initial development of Buddhism in the Northern Liang region was not significant until the arrival of Kumarajiva, a renowned monk who played a crucial role in the promotion and establishment of Buddhist culture in the area, despite facing several challenges and setbacks during his life.[12] The Mogao caves in Dunhuang include three caverns that date back to the Northern Liang period. These caves mostly showcase depictions of male flying apsaras, with the inclusion of both genders becoming evident during the Western Wei dynasty.

Cave 272, located inside the Mogao Cave

s complex, is attributed to the Northern Liang dynasty. The artwork displays prominent attributes that have been passed down from the Western Regions, such as the unique halo-smearing painting method, as well as round face features and robust physiques. These qualities may be traced back to the Western Regions' artistic tradition. The method known as halo-smearing in painting involves the progressive mixing of colours towards the central area, accompanied by the application of white pigment to enhance highlights at the highest points. This approach has the benefit of effectively enhancing the three-dimensional quality of human figures.[5-9] During the Northern Wei period, there was a noticeable emergence of Han Chinese traits in the depictions of flying apsaras. In order to see the presence of airborne apsaras during the Northern Wei period, it is not necessary to only visit the Mogao Caves. An alternative option is to explore the many sculptures in the Yungang Grottoes, situated in Datong City, Shanxi Province. During this historical time, craftsmen had a notable inclination for representing heavenly beings in flight, since these images were prevalent across all parts to the point of becoming overwhelming.

Figure 5: Flying Celestial Figure from the Yungang Grottoes (Cited from: History of Flying Apsaras Art: Symbolism and Significance in Cultural Heritage https://www.newhanfu.com/51719.html).

The provided image portrays a heavenly being in flight, originating from the Yungang Grottoes (Fig 5). The Yungang Grottoes display flying heavenly figures whose outfit and look reflect distinct traits of sinicization. These qualities are seen in their apparel as well as their slender facial features, which deviate from the conventional round features. In this historical period, there emerged a synthesis of methodologies coming from the Western Regions and dynamic stylistic elements drawn from Central China, exemplifying a harmonic amalgamation of Eastern and Western influences.[2-8] Following the aforementioned time, the era spanning from the Northern Zhou to the Sui Dynasty emerges as a significant juncture in the development of flying apsaras art, representing its intermediate phase. During this period, the ancient Chinese population progressively developed a distinctive comprehension of heavenly entities that had discernible Chinese attributes. During this period, there was a shift away from painting styles that were inspired by the Western Regions, and instead a preference for adopting traditional methods that originated from Central China. The Sui Dynasty, particularly, fostered an environment characterised by open-mindedness and confidence, which had a significant impact on the realm of creative expression.[12] The portrayal of flying apsaras was characterised by their bold depiction as alluring and elegant female figures. The creative approach exhibited a heightened level of audacity, with prominently exposed chests, naked backs, and bare feet. The paintings conveyed an intense fervour and a remarkable sense of splendour (Figure 6).

Figure 6: The Paintings Found in Cave 404 at the Mogao Grottoes, which Originated During the Sui Dynasty, Depict Two Apsaras Engaging in a Serene and Elegant Flight Amongst a Backdrop of Azure Sky.

Apsaras In Art: Depictions of Celestial Nymphs

Hindu mythology has a multitude of semi-divine entities that are neither gods nor demons. Celestial nymphs in this group are called apsaras. They are often the spouses of the Gandharva's, the musicians, and they are stunning and skilled dancers. They perform at the gods' mansions. They are skilled in the art of luring both humans and gods. They're likened to angels, have the ability to fly, and can change form. Apsaras are connected to reproductive rituals and have control over gambling fortunes. Among the well-known apsaras in Indra's court are Ghritachi, Urvashi, Rambha, Menaka, and Tilottama.[11-14]

Recent studies have highlighted the dynamic cultural exchange reflected in Apsara depictions across Northern Wei cave art. Wang[15] emphasizes the adaptation of Indian stylistic elements within Chinese Buddhist iconography, particularly focusing on murals in the Changchuan tombs. Similarly, Shi, and Chen[16] discusses the cultural significance of Apsaras in conveying Buddhist ideals of transcendence and impermanence, while also serving as a bridge between Central Asian and Chinese aesthetics. These analyses reveal that Apsara depictions were not merely ornamental but held deep philosophical and cultural significance. Moreover, Lazarus[17] explores the transformative role of Buddhist visual narratives in Chinese art history, with specific references to the flying Apsaras. His findings suggest that these celestial figures were instrumental in establishing a visual language that communicated abstract Buddhist concepts to diverse audiences. Additionally, Xu[18] highlights how architectural spaces, such as the Yungang and Longmen Grottoes, provided a spatial context that amplified the symbolic impact of Apsara figures, underscoring their role as both religious and artistic icons.[15-21]

THE APSARA AND SARIPUTTA IN CENTRAL CHINA OF NORTH WEI DYNASTY

The initial peak in the development of the Vimalakirit pictures, the North Sui dynasty saw the images' whole evolution. In addition to the pertinent pictures of the 169th wat of the West Qin Bingling Temple. The northern Wei period's Yungang Grottoes served as the main inspiration for the creation of Vimalakirit pictures. Concurrently, the awareness of the display of Apsara and Sariputta's pictures had surfaced. For example, the Vimalakirit pictures at Yungang Grottoes on the west wall of the 14th wat and the south wall of the 6th wat. Pic 1.2.[4] Two people were kneeling with their hands clasped in front of Manjusri and Vimalakirit, who were standing on each side of Shakymuni in the sixth wat picture. A top bun nun is the woman on Vimalakirit's side, while a black monk is the guy on Manjusri's side. The two individuals are in accordance with the identities of Apsara and Sariputta, ranking after Manjusri and Vimalakirit, respectively, and holding a symmetric configuration position with them. They are probably Apsara and Sariputta because of the differences in their facial expressions from those of the other listeners. Their stances can be connected to the Wei Dynasty architectural practices of the Yunguang Grottoes at that period. Bodhisattvas and other avatars are in the same poses at the same moment.[16,17] Three individuals were kneeling on the ground and four others were folding their hands in the picture of the seventh wat. Therefore, as the pictures show, certain positions were common at the time. Our conclusion may be made based on the facts provided above. In this instance, the performance is evident; it only highlighted Apsara and Sariputta's identities and configuration characteristics.

Symbolism And Functions of Apsaras in Buddhism

Apsaras are heavenly fairies or nymphs that are indigenous to Buddhist and Hindu mythology. They are often portrayed as seductive, gorgeous, and musically and aesthetically gifted. Apsaras are often seen as representations of the natural world and are connected to fertility and water. In Buddhism, apsaras take on several personas.[22,23] They are claimed to guard Buddhist temples and monasteries and are occasionally seen presenting flowers and other gifts to the Buddha. Since apsaras are often shown as dancing and singing while knowing that their time on earth is short, they are also seen to be emblems of the transience of all things.

These are a few of the particular meanings and purposes of apsaras in Buddhism:[15,22]

- Symbols of beauty and sensuality: Apsaras are generally represented as lovely and seductive creatures. This is probably because they are associated with fertility and the natural world.
- Symbols of the impermanence of all things: Apsaras are generally shown as dancing and singing, even though they realize that their time on earth is short. This serves as a reminder that everything, including our own existence, is transient.
- Protectors of Buddhist temples and monasteries: Apsaras are frequently represented as safeguarding Buddhist temples and monasteries. This might be as a result of people seeing them as strong, kind entities.

- Offerers of flowers and other gifts: Apsaras are frequently represented as presenting flowers and other gifts to the Buddha. This is a manner of displaying their appreciation and dedication to the Buddha.

Role of Apsaras In Buddhist Iconography

Buddhism's genetic makeup is braided from Vedic genomes that are preserved in Hinduism's ethos. Buddhism continues to be related to the fundamentals of the Sanatan Dharma via the support of ancient Hindu philosophy and customs. The Vedic Hindu writings are the source of the four basic Buddhist precepts: anandi, karma, samsara, and moksha. These precepts further the Buddhist concept of achieving nirvana. The Vedic link between Hinduism and Buddhism is confirmed by the existence of Brahma, Ganesha, Shiva, Varuna, Yama, Durga, and a host of other Hindu Gods, Goddesses, and Demi-Gods. Buddhism is clearly descended from Hinduism, as shown by the similarities between the several incarnations of Vishnu that are reflected in the various avatars of the Buddhist God "Lokesvara" and the Hindu goddesses' resemblance to the Buddhist goddess "Tara," who is portrayed as both Green and White Tara. Devatas, Rakshasas, Yoginis, Yakshinis, Dakinis, Gandharvas, and the Apsaras are also abundant in Buddhism.[15,24] The Buddha's popularization movement began in the second century BCE, roughly. Buddhism effectively spread across Asia after escaping the periphery of China. Theravada Buddhism, often known as the "School of the Elders," is said to be the oldest and most closely aligned with the Buddha's original teachings. Theravada Buddhism extended into Central Asia, eastern and coastal Iran, Pakistan, and Afghanistan. Later, in the second century CE, it made its way to China, from where it spread to Sri Lanka and Myanmar. From then, it spread to Thailand, Cambodia, and Laos as well as the rest of Southeast Asia. The Chinese Mahayana school of Buddhism, which expanded to Sumatra, Java, Vietnam, Cambodia, and Malaysia, also enjoyed growth in the second century BCE. Beginning in the seventh century CE, the Tibetan Mahayana School of Buddhism embodied the whole historical development of Chinese Buddhism. It originated in Tibet and extended from there to the Himalayan areas, Mongolia, Central Asia, Buryatia, Kalmykia, and Tuva.[12-15,19]

Both Buddhism and the heavenly Apsaras were in vogue across Asia. Possessing characteristics of both Buddhism and Hinduism, these exquisite and mysterious beings of Brahma were mainly shown in Buddhist art and architecture as hovering in midair, encased in flowing and flowing robes, and swinging above the Buddha. They may be seen doing divine chores like as showering flowers on the Buddha, playing musical instruments for Him, lighting incense sticks, and generally exalting the Buddha and His surrounds. Notably, images of these stunning aqua damsels may be seen within and outside of Hindu and Buddhist temples throughout Tibet, China, South Asia, and Southeast Asia.[18]

Apsaras In Hindu Art And Mythology

Starry nymphs known as apsaras are seen in Buddhist and Chinese mythology. They are often praised for their extraordinary beauty, elegance, and musical and dancing prowess. It is thought that apsaras live in the sky and amuse the gods and goddesses there. They are also connected to the water, rain, and fertility. Numerous ancient Chinese literature, such as the Mahabharata, the Puranas, and the Rig Veda, make reference to apsaras. In these writings, they assume a number of roles, such as seductresses, messengers, and even fighters.
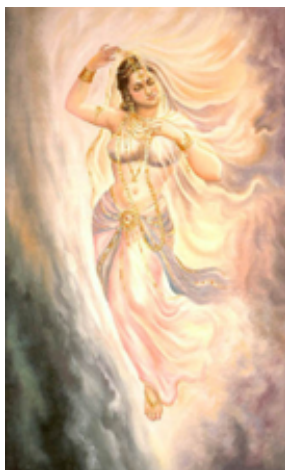
Figure 7: Apsaras in Mythology.

EVOLUTION OF APSARA ART IN THE NORTHERN WEI CAVES

The Apsara artwork found in the Northern Wei Dynasty caverns offers an intriguing look into the history of art across time.[2-14,19] These crucial stages allow us to track its progress:

Early Adoption and Adaptation (386-439 CE)

The earliest cave complexes were built as a result of Buddhism receiving imperial support in the early years of the Northern Wei Dynasty. During this period, apsara art mostly adhered to Chinese customs, portraying heavenly dancers with Chinese faces, clothes, and body positions. Among other places, the Yungang Grottoes include these early Apsaras. In contrast to sculptures from subsequent eras, these pieces were often less stylized and detailed.

Fusion of Styles (440-465 CE)

The Northern Wei Dynasty relocated its capital to the culturally significant city of Luoyang, where Apsara art started to take inspiration from other areas. Chinese, Central Asian, and native Chinese artistic influences were combined at this time. As Chinese aesthetics developed, apsaras began to reflect more regional traits and were shown in increasingly elaborate clothing.

Flourishing Creativity (465-495 CE)

The art of Apsara reached its pinnacle during the late Northern Wei dynasty. Artists and sculptors started to be more imaginative and inventive. The sculptures of Apsara became more elegant, with ornate jewels and billowing garments. Expressions on Apsaras' faces grew more expressive, and she was shown in a range of positions—not only dancing but also performing music or indulging in other pastimes.

Transition to the Northern Qi (496-550 CE)

Many of the late Northern Wei aesthetic elements, such as the slender figures, flowing drapes, and elegant stances, were still present in the Apsaras of the Northern Qi Dynasty (496–550 CE). Still, they also had a very Northern Qi quality about them. The Buddhist idea of nirvana had an impact on the Apsaras' expressions, which became more tranquil. Additionally, the Apsaras were shown with more ornate jewelry and hairstyles, which reflected the vogue of the Northern Qi court. The height of this gilded bronze Apsara sculpture is about 10 inches. Standing with her left arm up and her right leg slightly bent, she is shown. She is decked out with a flowing gown and ornate jewelry, such as bracelets, earrings, and a necklace. Her hair is arranged in a flower-decorated high bun. The Apsara has a calm look on her face, her eyes lowered a little.[2-12] Some of the most exquisite and lovely examples of Buddhist art from this era are the Apsaras of the Northern Qi Dynasty. They exhibit the Northern Qi court's sophisticated taste and customs.

METHODOLOGY

The application of digital narratives thus constitutes a worthwhile and time-saving method of enhancing people's appreciation of early history through understandable negotiations of digital descriptions of such materials. The digital narrative is about a type of communication which employs the digital media to depict in real and moving pictures. Thus, these narratives may be effectively communicated to the audiences as they work by extracting important information from the murals and giving it a new set of narrative parameters. This is particularly important for those who only have a short time to be in physical sites of history, so the shortened version of the narrative could help in understanding key elements of history depicted in murals in a short amount of time. As such, it makes contribution to their further accumulation of more extensive information.

Seminars of digital storytelling and digital storytelling for heritage like frescoes that included tale, by applying the framework which revealed the most critical aspects of these topoi and artefacts and using the primary character to build coherent relationships between these aspects. The application of this framework helps to condense large historical descriptions and despite this, keep crucial details; this explains why cultural knowledge will be passed to tourists effectively. In modern society, people, including users, are keen to combine learning and fun when interacting with digital heritage. First, there is the conventional historico-architectural approach to representing heritage, in which learning and explanation take center stage and inevitably fail to stir people's passion. However, in those works the opposite seems to be the case: the stress on entertainment appears to de-emphasise the importance of the cultural filter. Balancing the application of new technologies as the key determinants for work organization in the field of healthcare.

In a paper by Chang, *et al.*[25], there is information that at the National Palace Museum, the visitor can solve an actual game. It is believed that such motive as "heritage" will be becoming the object of focusing with time due to the advances in technology. In the current exegesis, the author provides an introduction to an interactive storytelling project intended for implementation within a cultural heritage context through the use of the research via design approach. It is argued that the use of RD methodology is especially relevant to study both epistemological and pragmatic dimensions of design. This exegesis examines the relation as a way of building the prototype and for this purpose, animation of the flying Apsara and a map of silk road to explain cultural and aesthetic evolution of Dunhuang. This type of digital storytelling pays credence to the historical setting analyzing the context in which storying took place. The "storytelling" subtheme consists mainly of research concerning the design of the story and its content components. On the other hand, the "digital" aspect concentrates more attention on some of the technicalities that go with the preparation and designing of related experiential elements within a concrete location.

The Intersection of Cultural Heritage, Storytelling, and Design

The major research approach used in this project was research via design. The methodology used in this study included historical research, precedent analysis, digital narrative design, and experience design. The present historical investigation examines the contextual factors surrounding the transformations seen at the historical site, as well as the tales shown in the paintings. The primary emphasis is placed on a particular figure portrayed within the frescoes. The present research examines the literature pertaining to digital storytelling in the field of heritage, assesses their accomplishments, and highlights areas where design innovation is lacking. The designer then devised a series of experimental procedures aimed at determining the optimal method for representing digital tales pertaining to heritage.

The Use of Digital Storytelling within Museum Settings

The use of digital technology in museums facilitates the transformation of static antiques and artefacts into immersive and interactive experiences. This is achieved via the implementation of many methods, including holographic pictures, animatronic figures, and immersive environments. In recent times, museums and galleries have emerged as prominent venues for the integration of mixed or augmented reality technologies. The combination of digital components and tangible items within a shared spatial context results in the formation of an all-encompassing setting, whereby these elements have the potential to engage in mutual interactions.[26] Molnar, and Kostkova[26] explores the use of expansive theatrical-sized movie screens inside exhibition settings with the aim of fostering an immersive experience. In contrast to the Virtual Reality (V.R.) technique, the utilisation of a large screen typically provides limited or negligible opportunities for audience interaction. However, it still enables participants to embark on a fictional journey due to the dimensions and configuration of the screen, which may include a wraparound curve. Additionally, enhancements such as artificial smell and sound may be incorporated. In some aspects, the process of designing for a wide screen is seen as more convenient compared to creating for virtual reality (V.R.) devices. This is due to the use of a cinematic narrative tool, which is already well-known among designers.

Design of Caves of Flying Asparas for Educational Purpose

The topic of discussion pertains to the concept of physical space.

The size of museums or exhibits can vary significantly, ranging from large multi-story museums to small single installations. Regardless of the physical space, three important factors that need to be considered in the design process are: 1) Scene setting, 2) Mapping and Routing, and 3) Crowding density.[27] In the context of a limited-scale exhibition, the process of establishing the scene necessitates the presence of a distinct and coherent subject, as well as succinct information, in order to augment the comprehension and spatial awareness of the visitors. Prominent signage and arrows serve as effective spatial controllers that immediately capture individuals' attention, effectively controlling the trajectory of their visit. Sensory design may serve as a kind of communication, shown by the ability of a particular aroma to captivate individuals without relying on visual engagement. By including multi-sensory elements, this approach enhances the overall depth of the visitor experience, making it more impactful and memorable.[28] The density of crowding may exhibit temporal variations. Hence, it is important to take into account the maximum number of visitors during peak hours in order to mitigate congestion.

It is common for individuals to attend exhibitions or museums as a component of a social gathering; yet, scholarly investigations have often overlooked the aspect of social interaction.[17] Social contact encompasses more than just

face-to-face encounters in physical spaces; it also encompasses interactions that occur before to and after such encounters. Selvadurai, and Andreas Foss Rosenstand[29] posit that individuals engage in a practise known as the "pre-visit," whereby they peruse photographs and comments pertaining to an exhibition on internet platforms prior to attending the event. During their visit, individuals capture photographs of the exhibition and afterwards share them on social media platforms. These comments and images may then be accessed by other individuals as a kind of pre-visit experience. The whole process of visitors' social interaction consists of three components: pre-visit, visit, and post-visit. As previously mentioned, individuals who visit exhibits are not just motivated by leisure or educational purposes, but also seek diverse forms of communal engagement with other attendees. Individuals arrive with a specific intention and preexisting knowledge, akin to searching for desired items on a predetermined list.[27] Once the understanding of this link is attained, designers are more equipped to contemplate visitor motivation. The user's text does not contain any information to rewrite in an academic manner. The field of study that focuses on the organisation and presentation of information in a clear and effective manner is known as information design.

The use of information design has been extensively employed across several domains, including the application of experience design within educational contexts. According to the above graphic, the primary responsibility of the designer is to transform data into meaningful information and effectively communicate this knowledge to various audiences. The collection of raw data is a straightforward process that may be conducted ubiquitously. The absence of proper organisation and processing may lead to a state of "information overload,[20] when the audience becomes overwhelmed by an excessive amount of information. According to Shedroff, data may be categorised into three sections based on seven organising principles, including Time, Numbers, Alphabet, and Magnitude. 2) Classification and Geographic Position.

RESULTS AND DISCUSSION

The following three examples illustrate a sequential series of events: the creation of an animated film based on the narrative shown in the paintings of the Mogao Caves, the development of an augmented reality display focused on a specific cave inside the Mogao Caves, and a digital restoration initiative centred on a significant historical site in China. The first two predecessors demonstrate previous endeavours in the investigation of the digital Mogao Caves, while the last precedent presents a comprehensive framework for the organisation and representation of digital material inside a historical site comparable in magnitude to the Mogao Caves.

Deer of Nine Colours

The cartoon titled "A Deer of Nine Colours" was made by the Shanghai cartoon Film Studio in the year 1981. The adaptation of the narrative may be traced back to a mural found in the No. 257 Cave inside the Mogao Caves. The integration of cultural heritage with digital storytelling in this animation marks a significant milestone in the history of Chinese animation. As a result of this animated film, the narrative of the nine-colour deer gained widespread recognition among the contemporary audience. Regrettably, subsequent to this first endeavour, there seems to be a dearth of similar animations made within the Chinese animation business. Despite the vast collection of narratives housed inside the Mogao Caves, it is noteworthy that the tale of the nine-colour deer remains the only well known account.

Land: Pure

The exhibition titled "The Pure Land," curated by Sarah Kenderine, showcases the use of augmented reality in conjunction with digital information to present the paintings and antiquities found inside the Mogao Caves. The initiative provided a noteworthy contribution to the process of digitising the Mogao Caves, while also establishing a connection between digital heritage and the conventional exhibition methods used in museums. Within the installations, Kenderine assumed leadership of a team tasked with conducting a laser survey of the permanently closed cave #220, a task necessitated by the cave's considerable size. The use of augmented reality and 3D digital visualisations as overlays on the murals facilitated the execution of this task. The project used a multi-layered structure to effectively segregate the original paintings from the subsequently restored layers. This approach was adopted to ensure that the exhibition could faithfully depict and facilitate an engaging tour of the cave. Kenderine's effort not only showcases the possibility for digital representation of the Mogao Caves, but also highlights the advantages of such an endeavour.

Historical Assessments

The art forms of the Mogao Caves exhibit a diverse range as a result of historical transformations and cultural transfer.

The creative forms that have been inspired by a multitude of nations and civilizations include Indian, Greek, Tibetan, and Mongolian traditions. Moreover, it is worth noting that when artists hailing from other cultural backgrounds engage in artistic endeavours inside the Mogao Caves, they include various components derived from their own cultural heritages. These elements encompass a wide range of aspects, such as musical instruments, clothing, patterns, and more. A unique Apsara figure has the ability to embody a prominent artistic style or cultural identity, whilst a simplified representation of the Silk Road may provide insight into the geographical origins of this culture and art form. Within the context of my project, the animated depiction of the flying Apsara is combined with two-dimensional cultural materials in order to effectively achieve the objective of representing and interpreting digital heritage. The Apsara figure in the animation is derived from original paintings, therefore serving as a kind of representation. Additionally, the transformation of 2D cultural aspects throughout several dynasties' art styles may be seen as a process of progress.

Figure 8 illustrates four archetypal Apsara figures found inside the Mogao Caves, originating from several dynasties and arranged in a chronological sequence. Within every frame, the frescoes in their original form are situated on the right side. In contrast, the character sketch on the left side is structured in accordance with the provided source (Figure 8).
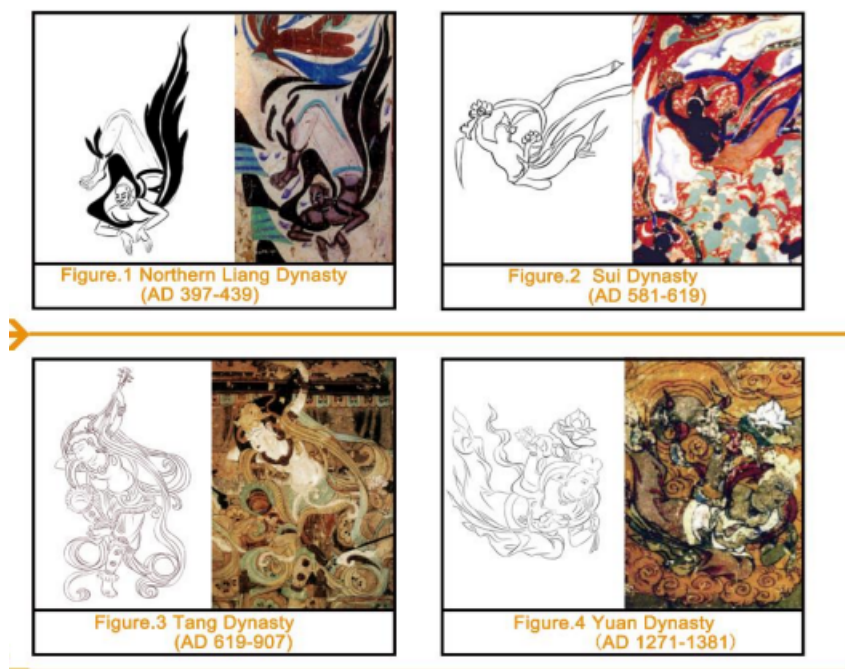
Figure 8: Asparas in Different Dynasty (u, Y. (2014). The Digital Mogao Caves - ConfuciusMag, V(34). Retrieved from http://confuciusmag.com/digital-mogao-grottoe).

The Development of Characters has Significant Importance within the Realm of Interactive Storytelling

Figure 8 depicts the artistic renderings of the four Apsara figures throughout several historical eras. The Apsara may be categorised into four distinct periods: early, middle, peak, and late, which are arranged from left to right. Based on the above historical research, it can be seen that every Apsara has been provided with a ribbon, skirt, headpiece, and accompanying accessories. The majority of the Apsara murals found in the Mogao Caves exhibit intricate lines and patterns, depicting deities or divine beings. In contrast, the decision was made to maintain a simplistic aesthetic for the Apsara by eliminating superfluous patterns and lines, while also refraining from including prominent elements. Additionally, the project is conveyed via a concise animation with a duration of around two minutes.

The inclusion of more information poses a challenge for the audience's ability to maintain concentration within a limited timeframe. Consequently, we carefully curated the essential characteristics of each bodily component from their respective dynasties and amalgamated them into a cohesive whole. This will provide the viewers with a enough amount of time to fully understand and grasp the intricacies of each design element shown during the duration of the animation.

Figure 9: Artistic Renderings of the Four Apsara Figures Throughout Several Historical Eras.

FACE Designs

The facial design is a crucial element used in the differentiation of the four Apsaras. Based on the findings of historical study spanning from the early era to the last period, it is evident that there exist distinct variations in gender and ethnic characteristics (Figure 10). The first depiction of the Apsara has characteristics reminiscent of a masculine figure with Indian attributes, since Buddhism was initially disseminated in China from India. The second Apsara represents a transitional phase between the first and third Apsaras. The third Apsara is characterised by Chinese plump feminine characteristics, while the final Apsara exhibits Mongolian traits due to the influence of the ruling Yuan Dynasty at that era.

Figure 10: Facial design for Aspara.

Digital Storytelling

A character that is deemed effective always has a wealth of information, since even a motionless sculpture has the ability to convey a narrative about character. When someone see a well crafted sculpture, they may derive substantial information from its attire, embellishments, face expression, and posture. The determination of an Apsara's origin may be inferred by an analysis of their facial traits and skin complexion. The majority of Apsaras shown on the walls of the Mogao Caves lack documented information on their origin or the specifics of their creators. However, these portraits from a particular dynasty may provide insights into the societal and cultural characteristics prevalent during that period. Likewise, various fabric textures such as linen, cotton, and silk, as well as hairstyles, clothing choices, jewellery, and personal possessions, together contribute to the overall characterization of an individual, with each element serving a distinct purpose and lacking any superfluous components. Every individual plays a crucial role. Numerous characters depicted in Buddhist narratives possess distinct objects held in their hands or adorning their

bodies, and the flying Apsaras are no exception in this regard. The duties performed by the flying Apsara are often categorised into four distinct aspects: There are other activities that individuals engage in, such include playing musical instruments, engaging in prayer, blossoming and emitting pleasant scents, and participating in dance. In order to convey the many functions of the flying Apsara, each Apsara involved in this undertaking will assume a distinct role. Furthermore, it is worth noting that each Apsara has at least one item that serves to augment the depth and complexity of their character, while also providing additional opportunities for the interaction and transformation of both the two-dimensional and three-dimensional aspects. An example of this may be seen when the figure is shown holding a china bottle. In this scenario, the two-dimensional components have the ability to enter and exit the bottle, as opposed to just swirling about the character.

The incorporation of body movement has significant importance within the realm of Chinese traditional animation, particularly in relation to the portrayal of figures that bear resemblance to fairies and gods. The characters shown in traditional Chinese animation have a preference for executing movements that are characterised by a gentle, seamless, and graceful quality. The selection of appropriate movement for the characters plays a crucial role in unifying the narrative of the four individuals. The project will include the application of pattern modification to the layer situated between the solid black backdrop and the characters, so creating a 2D animation. The whole animation was composed of four screens, with each screen including three layers arranged in a front-to-back sequence: the character layer, the pattern layer, and the backdrop layer. The backdrop layer and pattern layer are merged together in order to replicate the environmental characteristics of the original paintings. The objective is to recreate the ambiance of the Mogao Cave, with the inclusion of three-dimensional Apsaras that traverse the physical area.

CONCLUSION

The factor of Apsaras, the delightful heavenly spirits of Buddhist/Hindu mythology, has been strongly felt to reshape the field of Northern Wei cave art. The drawings of the celestial beings presented in these art pieces serve as affirmation that the contacts between many a culture, religion, and artistry practices in Old China were very dynamic. It is relatively easy to visit the Northern Wei Caves, as they are situated in the midwest of the middle Kingdom of the Great Wall. This art is worth a visit and gives a rather elating view of how Buddhism meets regional norms and preferences. One of the main factors that enabled the building of these caves was Buddhism thereby allowing Apsara art to develop behind the sanctity of the caves. These divine spirits were able to join the earthly and the divine worlds; these were more than just marvellous pieces of art; they were exemplified spirit and philosophy. Apsaras assumed a number of tasks in Buddhist decoration, of elegance purity and the seduction that belongs to the divine. They taught their followers to aspire to the virtuous levels and be more than just ordinary people as they considered themselves mediators between the material and divine worlds. They seemed to have had a direct relation to the teachings of Buddhism, and were therefore an indispensable element of the Semiotic system of the Buddhist art. To understand Apsaras works done in Northern Wei Caves, it is appropriate to go back to Chinese mythological and artistic concept of Apsaras. As Buddhism began to spread across most parts of Asia, these gods – emanating from Hindu mythology – cut a niche for themselves in Buddhism mainstream. The supernatural elements of these early motifs were maintained with considerable skill by the Northern Wei painters while changing these themes to meet the requirements of the Chinese environment. The rough carving of figures outside the Apsara figures in the Northern Wei Caves demanded a considerable production of skill and skill. These heavenly nymphs are depicted realistically leaving a stunning and very detailed impression to the tourists up to date. The sculptors applied different materials and techniques, so these pieces could be categorized as art. Constant change of the religious and cultural contexts of ancient China as well as creative spirit manifested in the process of Apsara art creation, contributed to the appearance of the new conception of the art language in the process of its formation in Northern Wei Caves. Their shamanic heritage mixed with imported Buddhism to produce the rich and exotic art which has travelled the time and space continuum.

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