

PART THREE

History and Silk Road Studies

A Place of Safekeeping?

The Vicissitudes of the Bezeklik Murals

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Abstract: *Destruction of the Bamian Buddhist statues reminded us all too starkly of the fragility of our cultural heritage. This was not the first time objects have been destroyed in situ, nor will it be the last: wars, vandalism, and natural disasters will continue to take their toll. It is vanity to assume we can always predict or prevent such losses. In the early twentieth century, the actions of German archaeologists, who were among the first to remove many of the first-millennium murals from Buddhist sites around Turpan (or Turfan) and Kucha in today's Xinjiang Uyghur Autonomous Region of China, were decried as vandalism. Only two decades later, war in Europe destroyed many of the finest pieces. There is no place of safekeeping.*

The Buddhist cave site at Bezeklik near Turpan provides an excellent case study to illustrate the complex issues involved in the preservation and conservation of cultural relics and the primary importance of documentation. Many of the Bezeklik murals transported to Berlin and later destroyed by bombing were published as high-quality prints, invaluable to scholars today. This paper argues for the importance of detailed documentation, which should precede or at least accompany conservation efforts. It shows how the meticulous documentation carried out by some of the much-criticized archaeologists of the early twentieth century is now being used to identify and bring together dispersed collections and to reconstruct lost finds. All public cultural institutions have limited budgets, and providing cultural artifacts with a stable environment that ensures that they deteriorate as little as possible is of the highest priority for these funds. Documentation, however, should have equal priority.

Destruction of the Bamian Buddhist statues reminded us all too starkly of the fragility and impermanence of our cultural heritage. This was not the first time objects have been destroyed in situ, nor will it be the last: wars, vandalism, and natural disasters will continue to take their toll. It is vain to assume we can always predict or prevent such losses. In the early twentieth century, the actions of the German archaeologists who were among the first to remove many of the first-millennium murals from Buddhist sites around Turpan (or Turfan) and Kucha in the present-day Xinjiang Uyghur Autonomous Region of China were decried as vandalism. For the most part, however, the murals survived the transfer to what the archaeologists genuinely believed was a safe place where they would be accessible for future generations of scholars. Only two decades later, war in Europe destroyed many of the finest pieces. There is no place of safekeeping.

The Buddhist cave site at Bezeklik near Turpan provides an excellent case study to illustrate the complex issues involved in the preservation and conservation of cultural relics and the primary importance of documentation. Bezeklik is located in a canyon northeast of the ancient ruined city of Karakhoja (also known as Gaochang and Khocho) and 50 kilometers east of present-day Turpan (fig. 1). In the fifth century a series of temple caves were excavated 25 meters up the cliff face from a deep ledge looking down onto the river that flowed from the Tianshan to the north. Work continued for several centuries, and mud-brick freestanding temple buildings with domed roofs were also constructed on the ledge, where space permitted, with their backs hard against the cliff and, in some cases, opening into a cave. The caves and freestanding temples extended about 300 meters along the cliff (fig. 2). The largest of these structures is over

FIGURE 1 The Bezeklik cave complex today. Photo by Colin Chinnery. Courtesy The British Museum, Photo 1118/1 (25)

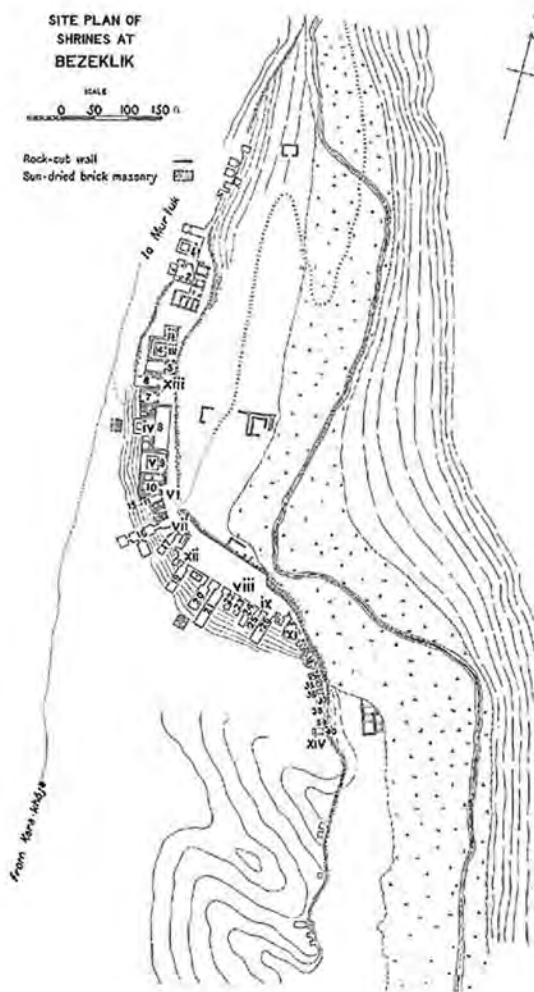


FIGURE 2 Site plan of the shrines at Bezeklik.

18 meters deep; the smallest, only 1.55 by 1.72 meters. They were decorated with murals and statues, like the cave temples at Dunhuang using many of the same techniques, and activity probably continued until the fourteenth century. Most murals showed Buddhist subjects, and many depict their Uyghur donors, but there are also some rare Manichaean murals (Jia Yingyi 1990). Many of the murals depicted *pranidhi* scenes, a name given to paintings common in Uyghur Buddhism that refers to the vow, or *pranidhidana*, to attain enlightenment, specifically, paintings of buddhas of past ages predicting Sakyamuni's enlightenment (Leidy 2001: 211–19).

Unlike Dunhuang, which still attracted pilgrims into the twentieth century, Bezeklik seems to have fallen into complete disuse by the late nineteenth century. It was placed under state protection by the State Council of the People's Republic of China in 1982.

Removal of Artifacts from Turpan Sites

In the late nineteenth and early twentieth century a series of explorers and archaeologists vied with each other to be the first to uncover and excavate the ancient sites of the eastern Silk Road on the fringes of the Takla Makan and Gobi Deserts. Most of the sites were deserted, and many had been partially covered by the desert sands. The archaeologists acquired numerous manuscripts and archaeological artifacts from these sites, most of which dated from the first millennium C.E. Some also removed murals and statues from the temples. All these objects were carefully packed into wooden crates and sent to Europe, Japan, the United States, and India.

The majority went first by camel and yak to the Russian-constructed railways into central Asia and the steppes and then by rail to Europe. Others were transported by pack animals across the mountains into India, and some continued by ship from there to various countries throughout the world. Almost all were placed in public museums on their arrival.

The region around Turpan was especially rich in such sites, as it had been an important staging post on the northern branch of the Silk Road. It was also reasonably accessible, especially from the Russian steppes to the north. The first European visitor in the modern era was Ioann-Albert Regel, a Russo-German botanist who was director of the Imperial Botanical Garden in St. Petersburg. He visited Turpan on his second expedition to central Asia in 1879. He noted the existence of an ancient ruined city, probably Karakhoja, but it was not until the end of the century that this and other sites in the area started to be surveyed and excavated. For fifteen years the Turpan area was the main focus of German expeditions, but it also received the attention of Russian, British, and Japanese archaeologists.

Early Exploration of Bezeklik

Other European explorers of eastern central Asia visited Turpan after Regel, among them the British Andrew Dalglish (in 1885–86) and Francis Younghusband (in 1886) and the Russian Grum-Grijimailo brothers (in 1888). The first to concentrate on Turpan's archaeological sites, however, was Dmitri Klementz, in 1898. Klementz was sent by the Eastern-Siberian branch of the Russian Imperial Geographical Society. He surveyed the Bezeklik temples and noted that many were impossible to enter, being filled with sand that had either blown in through the cave openings or fallen in through the broken domed roofs of the freestanding buildings. In the ones he could enter he noted that no statues survived. He found only traces of their bases or where they had been attached to the walls to suggest their original existence. From the marks on these remains, he surmised that they had been hacked away. He also reported the defacement of the murals. Some of the faces had been gouged out, and others had been smeared over with mud. His written report notes that he acquired forty fragments of paintings and fifty-nine inscriptions (Klementz and Radlov 1899).

On Klementz's return to Europe, he visited the Museum of Ethnology (Museum für Völkerkunde) in Berlin and spoke of the sites of Turpan to Albert Grünwedel, head of the museum's Indian Department. Grünwedel made the following report on Bezeklik:

Klementz and his self-sacrificing spouse found a whole series of cave temples from the Buddhist era, the entrances to which had been blocked up by sand drifts, but which were accessible via small openings made by the present inhabitants. All these cave temples are full of wall paintings (frescoes), the preservation of which is now greatly endangered by the fact that the Muhammadan population of the neighbouring villages has got into the habit of breaking off pieces thereof to fertilize their fields. Thanks to the foresight of the Imperial Academy, about 50 lb of such detached fragments of murals have already been brought to Petersburg, and a painter has been sent to make copies on the spot. I have seen a dozen or so such pictures, which were shown to me by the aforementioned gentlemen on their way to the Congress of Orientalists in Rome. (Cited in Härtel and Yaldiz 1982: 26–27)

Grünwedel's report suggests that the mural fragments were acquired by Klementz from locals. The theme of the "recycling" by locals of the soil used for the base of murals and from other ancient structures, either for fertilizer or as building materials, is widely reported, and not only by those eager to find a justification for their own removal of murals and structures. For example, the redoubtable and observant British missionaries Mildred Cable and Francesca French bemoaned the condition of Karakhoja, the ancient city south of Bezeklik, when they visited some decades later:

Destruction of the buildings had been going on for a long time, and we saw farmers at work with their pickaxes pulling down the old ruins and probably destroying many relics in the process. The agriculturists of the district found the old earth valuable for enriching their fields so they ploughed up the land . . . and sowed crops around the old monuments, but unfortunately the irrigation . . . is fatal to structures made of earth. . . . The peasants' ploughshares constantly brought treasures to light, and we came away with a seal, an old metal horse, a fragment of a Uighur manuscript, and other small relics. Many beads are collected by the children as they play among the ruins, and any old pots which are unearthed are taken into immediate use by the women, to save the expense of buying others. (Cable and French 1950: 201)

The German Turpan Expeditions

Klementz's report was instrumental in persuading Grünwedel to make Turpan the target of his 1902 expedition, made possible by a combination of museum and private funding. His party included a scholar, Georg Huth, and a museum technician, Theodor Bartus. Bartus would go on all subsequent German expeditions. He acted as photographer and was also responsible for the actual removal of many of the murals. The party reached the Turpan oasis in December and remained until March 1903, visiting the ancient city ruins of Karakhoja, the Bezeklik temples, and other nearby Buddhist cave sites at Sengim and Toyuk. They returned along the northern Silk Road to Kashgar, stopping at other sites en route. In total, they acquired forty-six cases of archaeological finds, but these did not include any from Bezeklik. The finds were sent overland to Berlin.

Because of the success of the first expedition, the Prussian state funded three additional expeditions. The first of these, in the absence of Grünwedel, owing to illness, was led by Albert von Le Coq, who set out in November 1904. The expedition went again to Turpan, and in March 1905, after several months' work at Karakhoja, von Le Coq moved his attention to Bezeklik. He reported that several of the southern caves were occupied by goatherds, and the murals were covered by the soot from their fires. The party camped in other caves in the southern section and spent the next few months clearing the northern caves of sand and sawing out the best examples of extant wall paintings. They concentrated especially on the almost intact *pranidhi* scenes from one freestanding temple, later numbered Temple 9 by Grünwedel. The finds from this second expedition numbered 103 crates, mainly holding Bezeklik murals.

On his recovery, Grünwedel set out for central Asia, and von Le Coq left Turpan to meet him in Kashgar in December 1905. Because Grünwedel again took leadership, this is seen as the start of the third German Turpan expedition, and both men and their party traveled east again to resume work. They first excavated at sites en route before Grünwedel reached Turpan in July 1906 (by this time illness had forced von Le Coq to return to Europe). Grünwedel made further removals of wall paintings in late 1906 and drew detailed plans of the forty largely extant caves, giving them his own numbering system. The photographs taken by Bartus clearly show the scouring effect of the sand on the murals. They also show defacement of many of those in situ and thus support Klementz's original report on their condi-

tion (Grünwedel and Preussische Turfan-Expeditionen 1912: figs. 535, 532). The 118 crates of finds from this expedition also included Bezeklik murals. The fourth expedition (1913–14) did not visit Turpan.

Mannerheim and Stein

The next European visitor to the site was Baron Carol Gustav Mannerheim, later Marshal Mannerheim, president of Finland (1944–46). At this earlier time Finland was an autonomous protectorate of Russia, and Mannerheim was a career soldier in Tsarist Russia's imperial army. Having been promoted to colonel during the Russo-Japanese War (1904–5), he was sent in 1906–8 on a reconnaissance expedition to northern China sponsored by the Russian military. Archaeology was not his primary concern, and on arriving at Bezeklik in October 1907, he simply observed that "the very badly damaged wall paintings (entirely broken off for large expanses) still gave an idea of what there was in days gone by" (Mannerheim and Hildén 1969: 1, 360). Of course, the missing murals included those taken by the locals, Klementz, and the Germans.

M. Aurel Stein, the Hungarian-born British archaeologist-scholar, was also on the Silk Road at this time, on the second of his four expeditions to the region. His focus, in contrast to Mannerheim's, was scholarship and archaeology, but in his first two expeditions he concentrated his activity on the ancient ruined cities and temples to the south of the Takla Makan. Although he visited Turpan in 1907 and arrived at Bezeklik in November directly after Mannerheim, he did not carry out excavations or take photographs at this time. Stein again concentrated on the southern sites on his third expedition in 1913 but then moved to Turpan in December 1914. He recorded his impressions of Bezeklik:

This visit had shown me that those shrines still retained a great portion of their wall paintings. But it had also afforded unmistakable evidence of the increased damage which the pictorial remains of this, the largest of the Buddhist sites of Turfan, had suffered from vandal hands since my first visit in November 1907. . . . With the sad proofs of progressive damage before my eyes, I could feel no doubt that, as local protection was out of the question, careful removal of as much of these mural paintings as circumstances would permit and artistic or iconographical interest would warrant, offered the only means of assuring their security. (1928: 634).



FIGURE 3 Bezeklik mural from the west wall of Temple 4, which was removed during Aurel Stein's expedition in early 1915 and is now in the National Museum, New Delhi. From Andrews 1948: pl. 16

Stein took a series of large-format photographs inside several of the caves, including Temples 4 and 9 (using Grünwedel's numbering),¹ and these clearly show their deteriorating condition. For example, Photo 392/29(193) shows the east wall of Temple 9 with the lower half missing and the two bodhisattvas both defaced. Photos 293/29(197) and (199) show the west wall of Temple 4 with a buddha and bodhisattvas, all defaced (Andrews 1948: pls. 15, 16). Stein later removed this mural from Temple 4 (fig. 3).

Japanese Expeditions

By the time of Stein's second visit to Bezeklik, members of Japanese expeditions, sponsored by Count Otani, abbot of Nishi Honganji Monastery in Kyoto, had also visited. The first Otani expedition was in 1902–4, before the second German visit. The young monk-explorers visited Bezeklik in 1903 and probably removed some murals. They also took photographs.

The second Otani expedition (1908–9) also acquired material from Bezeklik, including one large *pranidhi* painting, which does not have noticeable defacement, and smaller fragments from Temple 4, many of which had already been defaced. The large panel, which does not show noticeable defacement, was in the rear of the cave, and one might surmise it had been protected by the sand that originally filled these caves, as reported by Klementz and von Le Coq.

Russian Expeditions

The scholar Sergei Oldenburg, later the first director of the Institute of Oriental Studies in St. Petersburg, led two Russian expeditions to central Asia, in 1909–10 and 1914–15, later called the Russian Turkestan expeditions. His team included the artist and photographer Samuel Dudin. They visited the Turpan area on their first expedition and removed mural fragments from Bezeklik, including a complete *pranidhi* scene from Temple 4. There is no record of any visit to the site on the second expedition.

Dating the Defacement of the Bezeklik Murals

Klementz's report of the generally undefaced state of the paintings removed from Temples 4 and 9 (fig. 4) and modern photographs of the murals (Jia Yingyi 1990) suggest that there was already considerable damage to exposed paintings by 1898. However, those covered by sand were protected and remained in a good condition. Stein's comments suggest that they had been defaced once the sand was removed and before the site came under state protection. The documentation available to us, however, is not sufficient to be sure of the date or perpetrators of the defacement.

Dispersal of the Bezeklik Murals and Supporting Documentation

Although Bezeklik received other foreign visitors after Stein, as far as I have been able to ascertain, Stein was the last to remove murals from the site. By this time those murals previously removed by the various archaeologists mentioned above had been dispersed to various collections worldwide. This section explores the destination and fate of these collections, considering documentation, conservation, exhibition, publication, and access. This information, however, is not always readily available, especially on early conservation attempts and on current access.



FIGURE 4 Bezeklik mural from Temple 9, which was removed by von Le Coq and later destroyed during World War II bombing. From von le Coq 1913

Russian Expeditions

Klementz's and Oldenburg's finds, expedition notes, and photographs were sent directly through Xinjiang by pack animal, then by railway to institutions in St. Petersburg. Both men published expedition reports with sections on Bezeklik (Klementz n.d.; Ol'denburg 1914). These are in German and Russian respectively and have not been translated. Klementz's papers and archives were later transferred to what is now the Institute of Oriental Studies, St. Petersburg branch of the Russian Academy of Sciences; Oldenburg's are in the archives of the St. Petersburg branch of the Academy of Sciences itself (he became an academician). Their nonmanuscript finds (artifacts, murals, textiles, etc.) and photographs are now in the State Hermitage Museum. I have been unable to confirm that the Hermitage has all of the wall paintings and inscriptions listed by Klementz, and it is possible that these are still in the *Kunstkamera* Museum of Anthropology

and Ethnology or another institution in St. Petersburg. One piece is on display in the Hermitage. The whereabouts of the copies of the murals made by the painter sent from St. Petersburg and reported by Grünwedel is not clear.

Many of the Hermitage's collections were evacuated from the city by train during the German blockade in World War II. There was not time, however, to remove them all, and some, although protected by staff who remained in the city during the blockade, were damaged. These included the *pranidhi* scene removed from Temple 4 by Oldenburg. In 1953–54 it was partially restored by Hermitage conservators, but the gypsum slabs to which it had previously been attached were left in place and the plaster layer continued to deteriorate. In 1999 the Hermitage initiated a conservation program for the Turpan material (Blyaher, Vasilenko, and Gagen 2002), and in May 2002 the Temple 4 *pranidhi* scene went on display.²

German Finds

Grünwedel and von Le Coq's finds were also sent overland to Europe and, following conservation, were put on permanent display at the Museum of Ethnology in Berlin in 1926. The larger pieces were fixed to the gallery walls (fig. 5). By 1928 there were twenty-seven large rooms devoted to this material; in addition, the expedition notes, photographs, drawings, and plans were placed in the museum's archives. Both men published detailed expedition reports within a few years of their return (Grünwedel and Preussische Turfan-Expeditionen 1912; Le Coq 1913). Grünwedel's report reproduced his detailed site plans and a description of each temple, along with a selection of photographs. Von Le Coq's contained a very detailed description of Temple 9, including large-format and very high quality color and black-and-white lithographs of the many *pranidhi* scenes.

In 1934, with the threat of war, the museum curators started to compile lists categorizing the collections, and in 1938 many artifacts were moved into cellars and air raid shelters in Berlin. In 1944 the collections were moved once more, this time to salt mines throughout Germany. The material included many of the Bezeklik murals. Because the large murals fixed to the gallery walls could not easily be removed, they were protected in situ with sandbags and prayers. These were ineffective as the museum, in the center of the city, was bombed, and the paintings were destroyed. Only fragments were retrieved (Yaldiz 2000).

After the war the collections that had been dispersed for safekeeping were recalled to the museum, and in 1963



FIGURE 5 Bezeklik murals in Berlin's Museum of Ethnology before the building was bombed during World War II. Courtesy of the Museum für Indische Kunst, *Dokumentation der Verluste*, Band III, Berlin, 2002, 11.

they were transferred to the Museum für Indische Kunst in Berlin-Dahlem southwest of the city. A new building was inaugurated in 1971, and the galleries were refurbished in 1998. Some of the Bezeklik material was shown in a 1982 exhibition in New York (Härtel and Yaldiz 1982). However, more than two thousand accession numbers of the dispersed collections were unaccounted for, and some of this material was later discovered to have been taken by the Soviets on their withdrawal from Germany. Documentation has recently helped in the identification of some of this missing material (see below). Some other material from Germany was dispersed elsewhere, including a banner fragment from Bezeklik that von Le Coq had sold and which is now in the Yale University Art Gallery (Zhang Guangda and Rong Xinjiang 1998: 28).

Japanese Collections

The Japanese collections were sent to Kyoto but were dispersed soon after Otani resigned as abbot of Nishi Honganji Monastery in 1914. Unlike the other expeditions, the Japanese monk-explorers were privately funded by Otani, so the finds were not deposited in public collections. However, by 1926 the first expedition material was in the Imperial Gift Museum of Kyoto, but by 1944 these items were again in private owner-

ship, in the collection of Teizo Kimura. The Japanese government had to purchase them back after the war. Along with other items bought from other individuals, the collection was deposited in the Oriental Section of Tokyo National Museum, where it remains today. This includes some of the Bezeklik paintings.

A large part of Otani's second and third expedition material was kept in his house and sold along with the house in 1916. The buyer, Fusanoske Kuhara, presented the collection to his friend Masatake Terauchi, governor-general of Korea (annexed by Japan in 1910). Terauchi kept the collection in the Museum of the Governor-General, which later became the National Central Museum in Seoul. It remains there today and also includes a number of the Bezeklik paintings.

Some of Otani's papers, which included documentation from his expeditions, and his expedition photographs were given to Ryukoku University in Kyoto and are kept in the university's library. The photographs and papers have been cataloged and are available to the public via the library catalog.³ Some of these have been displayed at various exhibitions.

Stein Expeditions

The murals acquired by Stein on his second visit to Bezeklik were sent directly to Lahore, then part of British India, where they were acquisitioned by Fred Andrews, who was working as an assistant to Stein. Stein directed the design of display cases to house them in three large galleries in the building of the Archaeological Survey of India. These galleries were called the Central-Asian Antiquities Museum. By 1937 the murals had been conserved, and they were displayed until 1991. However, by this time they were reportedly suffering from "flaking and bulging" from the dampness in the building, which was subsequently demolished (Singh 1996: 57). The murals were then moved to the National Museum, New Delhi, which had been built in 1961 and already housed the part of the Stein collections that had been sent to India (the remainder were in the British Museum in London). However, the murals were kept in storage in galleries originally designed to display them. Since then the museum has carried out further conservation work, but as of 2006, they were still not on public display.

Stein published a detailed report of his third expedition in 1928. His photographs and papers were later deposited in various institutions: the largest part of the former are now in the British Library in London and of the latter in the Bodleian Library, Oxford University. The Library of

the Hungarian Academy of Sciences also has substantial collections (Falconer et al. 2002). A portfolio of large-scale reproductions of many of the paintings from Bezeklik was published in a 1948 catalogue, including both black-and-white collotypes and color lithographs (Andrews 1948).

Documentation of Archaeological Finds

Given the complex circumstances of the removal and dispersal of the Bezeklik murals over the past century, it would be easy to imagine difficulties tracking not only the current whereabouts of all the material but also the exact find site of each fragment. The original documentation of the archaeologists is the main aid to this latter task, but this varies greatly between archaeologists and between expeditions. For example, members of the first German expedition carefully wrapped each item and marked the wrapper with a signature—or string of characters—indicating its provenance. On accession in the museum the signature was transferred to the items and the original wrappers discarded. Grünwedel and von Le Coq distinguished between those items excavated at a site and those purchased from local people, for which provenance is, of course, less certain. Artifacts from Bezeklik were marked with the site signature “M,” standing for Murtuk, a nearby village.

Assigning a signature to each item after a long day of excavation in the field required an outlay of time and energy. It is not surprising, therefore, that this practice apparently was not continued consistently throughout the second and third German expeditions. What is surprising is that Stein implemented a similar system and kept it up throughout all his expeditions, resulting in over fifty thousand items from over one hundred sites being individually provenanced. Not only was Stein’s method more thorough than that of Grünwedel and von Le Coq; it was also safer. He wrote the signature on the item itself and kept a full list of the documented items that he then published in his expedition reports.

The following is an example of Stein’s coding system used for another Silk Road site. The wooden document shown in figure 6 bears Stein’s ink signature “N.XXIV.viii.19.” “N.” stands for Niya, a third- through fourth-century site on the southern Silk Road consisting of a spread-out settlement now in the Takla Makan north of present-day Minfeng. Stein prepared plans of all the houses he excavated there and assigned each a Roman numeral. So, for example, N.XXIV is the twenty-fourth residence he excavated. It can be seen from his plan of this residence (fig. 7) that the house consisted of



FIGURE 6 Wooden document found by Stein at Niya and bearing his inked site signature: N.XXIV.viii.19. Courtesy The British Library, Or.8211/1412(B)

several rooms, which Stein also numbered in Roman numerals, so “viii” is the eighth room of the house. The plan also shows the area where Stein found what he calls the “Hidden Archive”—a cache of wooden manuscripts from which the wooden document shown in figure 6 is the nineteenth he excavated from this cache.

In addition to this coding system, Stein prepared detailed documentation on the Niya site. His expedition report gives several pages of information, for example, about room 8 and the site find (Stein 1921: 226–33), as well as a description of each of the ninety-six documents found there (Stein 1921: 257–62) and a photograph of the room itself (Stein 1921: fig. 61). Recently, scholars have started to exploit this documentation in ways that Stein could not have imagined but that would certainly have delighted him. For example, one scholar has accurately mapped the ancient site of Niya using Stein’s maps and plans overlaid on modern satellite maps using GIS (geographical information systems). Many of the wooden documents name local officials and their roles, and, because the locations of these archives were accurately recorded by Stein, it has been possible to name and locate administrative regions of the ancient settlement and even to identify the houses and names of various government officials (Padwa 2004).

The International Dunhuang Project (IDP) at the British Library is entering all of the documentation from Stein’s expeditions on its freely accessible interactive Web database. It is possible for users to find the exact site of each of the fifty thousand items in the Stein collections and to view Stein’s maps and plans of the sites. The long night hours Stein spent recording the signatures on the documents and surveying the sites were not wasted. Where it is available, documentation from the German expeditions and from others is also being entered online by IDP. In addition to developing its own GIS Web map interface, IDP is using Google

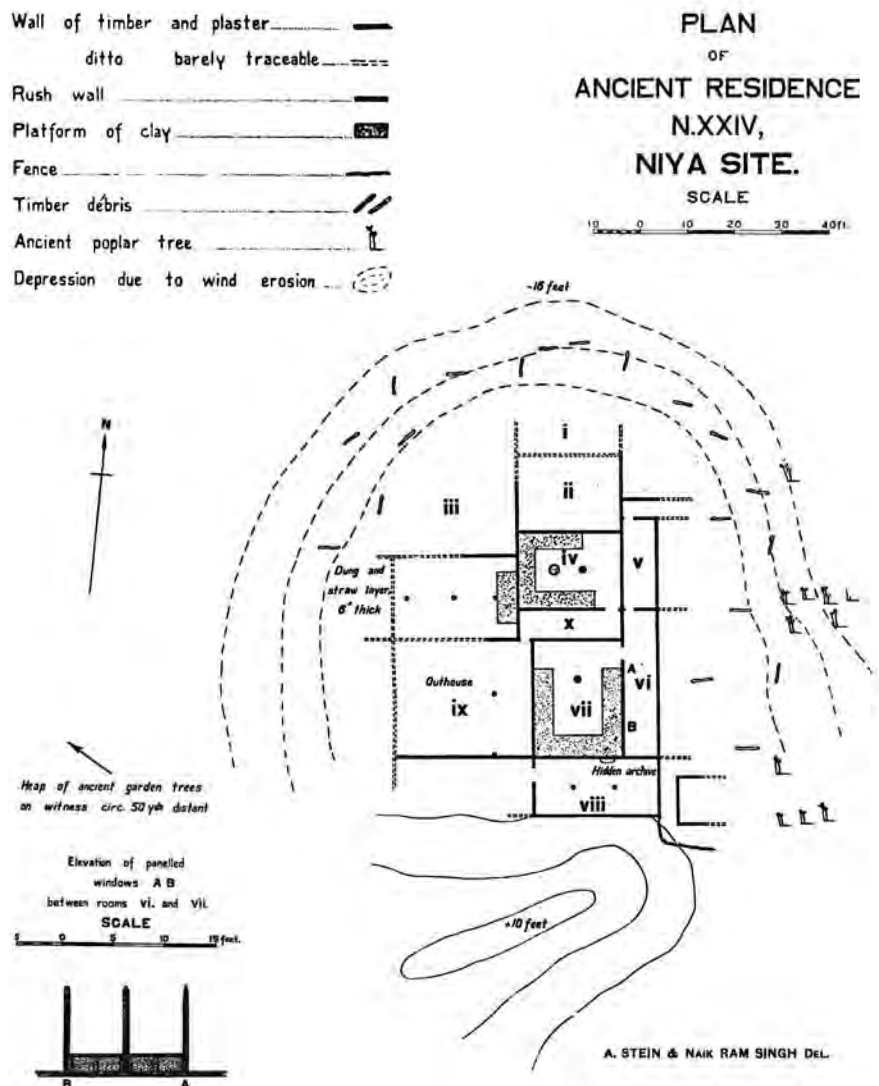


FIGURE 7 Plan of the twenty-fourth residence excavated by Stein at Niya, encoded as N.XXIV.

Earth to overlay the historical maps and site plans prepared by these early explorers.

The Importance of Documentation

Documentation of archaeological activity is essential for housekeeping and tracking the provenance of dispersed collections. As indicated above, all the expeditions to the Turpan region included photography as part of their documentation. The following two examples of documentation aptly illustrate its importance to archaeology. Although Stein was meticulous in keeping written records and plans,

his use of photography was more random, as John Falconer discusses in his paper in this volume. It was Charles Nouette, the photographer on the 1908 expedition of the French sinologist Paul Pelliot (who did not, unfortunately, go to Bezeklik), who stands out as the most assiduous photographer. His 1908 photographs of the Dunhuang caves are of immense value for documentation. For example, the main walls of cave 220 had been overpainted in the Five Dynasties (907–959) and Xixia (Western Xia or Tangut) periods (1036–1226). The overpaintings were removed in the 1940s, probably by the newly founded Dunhuang Research Institute (now Dunhuang Academy). It is not clear whether comprehensive photographs were taken by the institute before the overpaintings were removed, but Ning Qiang, in his recent study of the cave (2004), obviously could not locate any and was forced to refer to Nouette's documentation, specifically, the photograph taken in 1908 to show the "original" paintings of the south and west walls with the overpaintings intact. James Lo, another scholar who realized the documentary value of photography, took a photograph of the south wall in 1943, just before removal of the overpainting (in Ning Qiang 2004: 80–81).

Another example of the importance of documentation to help future generations identify material is that of the artifacts from German museums, mentioned above, taken by the Soviets at the end of World War II. Little was known about this material until 1978, when a large batch was presented to the Grassi Museum in Leipzig by the Soviets. Following Germany's reunification, 55,000 objects were returned to Berlin museums, including several hundred items from the Museum of Indian Art. But this left 1,562 items from the central Asian collections still unaccounted for, including about 100 pieces from Bezeklik (Dreyer, Sander, and Weis 2002). In autumn 2002 the museum's director, Marianne Yaldiz, was invited to the Hermitage to look at crates still containing material removed from Germany. In this preliminary investigation she identified 294 pieces from the Turpan collection. Essential to this identification was the documentation from

the expeditions and from the museum's own archives. As Yaldiz writes:

In 2002 the catalogue of art objects lost in and after World War II was finally completed after several years of intense investigation. Although there were numerous sources, the research involved many difficulties because much of the information in the card indexes and in the inventory books was incomplete. Irreplaceable aids for identification were the original glass plates which remain part of the Museum's photographic archive. Every clue on the identification of the lost objects was taken into consideration however little information it might offer. (2005: 2–3)

Documentation also plays a vital role in preservation, authentication, scholarship, and access. For example, a Japanese team of scholars has digitally reconstructed the wall paintings in Temples 4 and 9 at Bezeklik (Okada and Sakamoto 2007; Shoji et al. 2005). They were able to do this not only because of the documentation helping them to find extant fragments of the original paintings in the various collections worldwide but also because of von Le Coq's publication of high-quality lithographs of the *pranidhi* series, some in color. These showed the large wall paintings that were later destroyed in the bombing of Berlin. For the first time, these digital reconstructions will allow scholars and others to study the temples as a whole. In addition to increasing access to the Bezeklik site, the reconstructed wall paintings are digital surrogates that preserve this art for future generations, no matter what happens to the originals (bearing in mind that care has to be taken to preserve the digital surrogate: as is the case with any form of documentation, the documentation itself has to be documented).

The British Library's International Dunhuang Project is also collating digital documentation of dispersed collections but on a much larger scale. This work provides free Web access to information, documentation, catalogues, and high-quality images of all the finds from Chinese central Asia, including those from Bezeklik.

Of course, just as the original paintings and artifacts need conservation and secure storage to ensure their long-term preservation, so too do digital reconstructions, Web sites, and databases. There remain many questions about long-term preservation of digital data. Experience should tell us that they are subject to the same risks as the artifacts: we cannot guarantee a place—or method—of safekeeping.

However, keeping multiple copies of the data and storing them in different locations is one means of reducing the risk of loss that is not available for the originals. And just as documentation is vital to the identification and recovery of original artifacts, it is no less so for digital artifacts.

Conclusion

The various fates of the Bezeklik murals, both those removed and those left in situ, are a paradigm of the always uncertain and often precarious state of our cultural heritage: we cannot guarantee a place of safekeeping. Custodians of our cultural heritage must, of course, ensure the best and safest possible environment for the long-term preservation of archaeological sites and their artifacts and hope that events out of their control do not conspire to destroy that heritage. But they have an equally important responsibility to prepare detailed documentation and to ensure its safekeeping. Documentation can be kept in multiple copies in multiple sites, reducing the risk of its destruction or loss. This paper has shown how the meticulous documentation carried out by some of the much-criticized archaeologists of the early twentieth century is now being used to identify and bring together dispersed collections and to reconstruct lost finds. It might be all that we have left.

This conclusion has economic implications that are not always considered. All public cultural institutions have limited budgets. No one would deny that providing a stable environment that ensures that cultural artifacts deteriorate as little as possible is of the highest priority for funds. But documentation should be an equally important priority. Excellent work has been carried out by the Dunhuang Academy and the Getty Conservation Institute on the Dunhuang caves in the past decades, including making a full inventory of all the caves, with details of their periods and paintings, and taking environmental measures to prevent further damage from sand and water. But a fully documented, fully accessible, and comprehensive archival photographic record that is stored in several sites is still lacking. With the threat of earthquakes, water damage, deterioration from light, and the deleterious effects of ever-increasing numbers of visitors, this is now needed more than ever. Documentation is time-consuming work and does not yield immediate scholarly recognition. However, as I hope this paper has shown, its long-term impact is greater than any article or monograph and is as essential to preservation as any conservation project.

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Notes

- 1 Temples 4 and 9 were numbered Temples iii and v by Stein.
- 2 www.hermitagemuseum.org/html_En/04/b2003/hm4_1_27.html.
- 3 <http://opac.lib.ryukoku.ac.jp/web/index.htm>.

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Perspectives on Photography's Contribution to Archaeology in Central Asia

John Falconer

Abstract: *Photography's potential as a recording and documentary tool in the field of archaeology was acknowledged almost immediately after the medium became publicly available in 1839. While technical limitations hampered its use and effectiveness in early expeditions, the camera had become a standard item of archaeological field equipment by the end of the nineteenth century. The images surviving in archives and institutions constitute a uniquely valuable resource for present-day archaeologists, scholars, and conservators in illustrating the condition of buildings and artifacts at specific historical periods and in assessing rates of physical change and degeneration. Both the richness of the surviving visual record and its shortcomings in terms of method and comprehensiveness offer lessons to present-day scholars and archaeologists regarding the importance of making detailed photographic records an integral component in fieldwork and on-site conservation projects.*

This paper examines the early history of archaeological photography, with particular reference to its early development in India and in the context of the work of European archaeologists and travelers who converged on the archaeological sites of central Asia in the early twentieth century.

Photography's value to archaeology goes back to the earliest days of photography in the 1840s, when its potential for capturing data rapidly, accurately, and economically was first recognized. Although the early technology presented challenges—cumbersome equipment and complex and demanding processing procedures—within a few decades, the medium had become a standard tool in archaeological fieldwork.

The remarkable speed with which digital technology has advanced in the past decade will undeniably improve the

ease and speed of photographic documentation (and also present new challenges for the preservation, storage, and future accessibility of the digital record). It is probably not rash to assume that photographic film as a reproductive medium will be consigned to history in the foreseeable future.

While there will be major changes in photographic practice technically, it is important to emphasize the continuity of photographic documentation in the century and a half of the medium's existence. An examination of the research value of the existing historical record, specifically, for the study of central Asian archaeology, is also an opportune moment to emphasize the continuing importance of the photographic record for future studies in this field.

Photography and Archaeological Documentation

When photography first became publicly available in 1839, it was hailed with equal enthusiasm as a major new art form and as a tool of unprecedented scientific accuracy, ideally suited to supplant the fallible and subjective hand and eye of the draftsman in antiquarian researches. By the end of the nineteenth century the camera had become an integral tool for the archaeologist.

Among the earliest attempts to use photography for archaeology were the daguerreotypes of Central American sites taken by John Lloyd Stephens, Frederick Catherwood, and Samuel Cabot during their second Yucatán expedition of 1841. However, the technical characteristics of the daguerreotype process hampered publication of the resulting photographs. Most significant was the fact that every daguerreotype—unlike with the negative-positive photographic processes that ultimately superseded the

daguerreotype process—was a unique image produced on a silvered copper plate: multiple copies could be produced only by further photography or engraving. Furthermore, the daguerreotype produced a reflected image in which left and right were reversed. These factors prevented the multiple dissemination of such records, and in any event, these early archaeological photographs were used only as references for the engraver in the published account of the expedition (Stephens 1843). Similar problems plagued a pioneering attempt, financed by the Dutch government in the mid-1840s, to produce photographic documentation of the great Buddhist stupa of Borobodur on the island of Java. Here, the intrinsic technical limitations of the daguerreotype were exacerbated by both the difficulties of working in enclosed spaces in a tropical climate and the extent of the required documentation.

Advances in photographic technology, particularly the negative-positive processes on paper that replaced the daguerreotype, made the use of photography in the field increasingly practical. Some of the finest early results were achieved by a succession of primarily French photographers, such as Maxime du Camp, Félix Teynard, and Auguste Salzmann, who in the late 1840s and 1850s traveled and photographed among the antiquities of Egypt and the Middle East. Although the documentary component of this work remains valuable, its outlook was more embedded in artistic notions of the picturesque than in the emerging demands of archaeological practice. However, by the mid-1850s, the value of photography to archaeology was becoming increasingly recognized and accepted. When, in 1856, Charles Newton led the British Museum excavations at Cnidus and the site of the great Mausoleum of Halicarnassus, at modern Budrum in Turkey, two soldiers from the Royal Engineers were officially attached to the party to record the progress of the work. The several hundred resulting photographs display a clear subordination of the picturesque view to the demands of sober and systematic archaeological documentation.

Archaeological Photography in India

The East India Company, which originated in the seventeenth century as a commercial company trading in Asia, had become by the nineteenth century the effective ruler of much of the Indian subcontinent. These administrative responsibilities led to an increasing awareness of a rich archaeological heritage that by this time was becoming the focus of growing scholarly attention. While the formal establishment of the

Archaeological Survey was not to take place until the 1870s, already by the 1840s the East India Company was becoming aware of its responsibilities in this field and had started to take a positive role in recording the antiquities in India. For example, in 1847 a memorandum from the governor-general instructed the authorities under his control to take an active role in the collection of “really accurate, minute, and well classified information as to the nature, extent, and state of existing monuments” (Governor General in Council 1847). By 1851 the company had sanctioned the employment of an artist to document and make measured drawings of the cave temple on the island of Elephanta near Bombay. By 1854, however, the company was becoming worried by the potential expense of this seemingly open-ended commitment and recommended, on grounds of speed and economy, the use of “photography on paper” as a more efficient recording tool (East India Company 1854).

In the following year, a Bombay army officer named Thomas Biggs, already an experienced photographer, was released from his regular military duties at the request of the Bombay authorities to make a photographic tour of the Dharwar and Mysore districts of southern India, to record the key monuments from the cradle of Hindu temple architecture. Biggs made an impressive start, photographing temples at Aihole (fig. 1), Pattadakal, and other sites in the modern state of Karnataka, but his later report of this work reveals a curiously Victorian notion of the proper function of photography: in this, he drew attention to what he considered the “indecent” nature of some of the sculptures encountered in the Badami district of Dharwar, citing their erotic nature as evidence of the Indian moral decline and decay (a not uncommon response among many European antiquarians of the period, which could then conveniently become a justification for colonial rule). Biggs sought official approval to destroy any obscene sculpture encountered in his work.

Attitudes such as Biggs’s highlight the fact that while lip service was paid to the ideal of creating objectively accurate visual records, early archaeological photography was heavily compromised by a viewpoint that selected for documentation only those sites that were to be included in a canon of Indian art defined and categorized by European scholars. Photography thus became complicit in *creating* as much as *recording* the story of Indian architecture and sculpture. This selectivity was also influenced (in the early days of photography at least) by straightforward technical issues. The difficulties of photography—bulky equipment



FIGURE 1 Durga Temple, Aihole, India, photographed by Thomas Biggs in 1855. British Library, APAC Photo 965/1 (70)

and complex and delicate chemical manipulations carried out in a tropical climate—made large-scale documentation an immensely time-consuming procedure.

The East India Company had been absurdly overoptimistic about how quickly a total photographic record of Indian architecture could be made; company minutes from the 1850s suggest that all worthwhile recording could be completed within a few years. It was many decades before this optimism gave ground to an acceptance of the immense size of the task and a realization of its unending, indeed cyclical, nature. Subsequent experience with photography over the next century and a half demonstrated not only that the documentation was far from complete in India, but that, if it is to be fully and fruitfully exploited, it must be considered a continuing process as buildings are restored or come under threat from decay, pollution, and encroachment.

Biggs's photographic work, terminated by his recall to military duties, was succeeded by further photography projects in the 1850s and 1860s—many of them likewise ambitiously conceived and similarly abruptly terminated as funding ran out or the magnitude of the task became more fully apparent.

The East India Company's lack of administrative clarity in directing such initiatives reflected a corresponding lack of precision in planning and led to much duplication of effort. In the late 1860s, for instance, the India Office, which had taken over the administration of India after the demise of the East India Company, commissioned the commercial

photographer Edmund David Lyon to photograph architecture and archaeological sites in southern India. Drawn to temples and sites whose importance was undisputed, Lyon in fact rephotographed many of the subjects covered by Linneaus Tripe in the course of an earlier official commission in the previous decade, often from almost precisely the same viewpoint, while ignoring hundreds of "lesser" sites. Much of this work was carried out for the benefit of European scholars such as James Fergusson, the great architectural historian of India, who played a major role in defining the areas that should be covered by the Indian authorities, through what later would become the Archaeological Survey of India. For Fergusson and others, photography supplied crucial visual information from sites they were unable to visit personally. The dangers of such an approach are apparent in some of Fergusson's own published work: despite his breadth of personal knowledge, his reliance on the partial evidence from available photographs on occasion led to misidentification and generalization in his analysis of Indian building types.

The Painted Caves of Ajanta

An important example of photography's early service to archaeology in India can be found in the documentation of the Buddhist cave temple of Ajanta. Here, carved from the volcanic rock of the Deccan plateau into the face of a great horseshoe-shaped cliff overlooking the Waghora River, are some thirty *chaitya grihas* (prayer halls) and *viharas* (monasteries), built between the second century B.C.E. and the fourth century C.E., many of them richly embellished with wall paintings and sculpture. The Ajanta caves share similarities with those at Mogao. Both are World Heritage Sites, and, like the paintings at Mogao, Ajanta's paintings are threatened by tourist overload, natural decay, and the mistaken conservation initiatives of the past.

Abandoned in tiger-infested jungle for centuries, the Ajanta caves first came to European notice when a British hunting party stumbled across them in 1819. The fame of the wonderful wall paintings gradually spread as occasional parties visited the caves in subsequent years. The caves gained increased prominence when James Fergusson delivered a paper on them to the Royal Asiatic Society in 1843 (Fergusson 1846). Following this report, the board of directors of the East India Company, on the urging of the Royal Asiatic Society, instructed the Indian authorities to make copies of the cave paintings. Robert Gill, a Madras army officer already known as a talented draftsman with a taste for

adventure, was released from his military duties to carry out this work for long periods between 1844 and 1863. His reports give some idea of the difficulties of such work: many of the caves were so high and dark that copying was impossible without the introduction of strong lights and scaffolding; others were filled with water and mud “and all with the exception of one without ventilation, and the atmosphere tainted and unwholesome, and swarming with ants and bees”; and “one cave ha[d] its entrance on the face of a precipice and [was] accessible only by being let down by ropes from the top” (Gill 1844). Many of the walls also required substantial (and no doubt damaging) cleaning before copying could be attempted. There were additional risks in the form of illness and the presence of marauding bands of robbers in a notably isolated and lawless district. Tragically, most of Gill’s painstaking work perished while on public display in the Crystal Palace at Sydenham, London, in the great fire that destroyed the exhibition hall in 1866.

By this time, however, Gill had taken up photography, and for several years in the 1860s, he lived on-site at the

caves, building up a detailed photographic record of the caves comprising many hundreds of images. Despite an admirable attempt to work to a systematic pattern—all the cave porches, for example, are photographed three times: a head-on view, followed by views of the right and left sides (fig. 2)—the darkness of the interiors, compounded by the grimy state of many of the paintings, prevented the achievement of a comprehensive photographic record. While this remains a fragmentary documentation, of limited use to the modern scholar attempting to re-create the nineteenth-century condition of the paintings, the publication of some of the photographs, accompanied by Fergusson’s text, served to broaden knowledge of both the paintings themselves and their fragile condition (Fergusson and Gill 1864a, 1864b).

FIGURE 2 Stereoscopic interior view of the veranda from Cave II, Ajanta, India, taken by Robert Gill in 1868. British Library, APAC Photo 1000/20 (2062)



Even with the advances in photographic technology over the past century and a half, the technical problems associated with recording such fragile artworks have not been fully overcome. The most recent and in many respects most successful photographic reproductions of the Ajanta cave paintings were made by the Indian photographer Benoy Behl in the 1990s. However, Behl's photographs supply a selective, rather than a comprehensive, record of the cave paintings, and his own account of previous attempts at photographic documentation illustrates the very real difficulties of such work (Behl 1998). Ironically, perhaps the most valuable surviving visual references for Ajanta remain the photographic reproductions of the series of *painted* copies made in the 1870s and 1880s by students from the Bombay School of Arts. If none of these projects can be considered wholly successful, the availability of visual documentation may at least be credited with helping to head off the very real possibility, proposed in 1874, of the wholesale transfer of the paintings to a more accessible museum location, "where all the antiquarian and artistic world could see them" (Terry 1873).

Archaeological Survey of India

Following hesitant initiatives to establish an archaeological survey in the 1860s, the activities of individual scholars, government employees, and learned bodies such as the Royal Asiatic Society had created the momentum that led to the formal establishment of the Archaeological Survey of India in 1871 under the director-generalship of the military engineer Alexander Cunningham. From the survey's inception, photography was considered an integral tool for the fieldworker. This was to be strikingly illustrated by the end of the decade, when the young and inexperienced Henry Garrick was appointed archaeological assistant to the survey in preference to a candidate better qualified in the field, on the grounds that "as he is both a good photographer and a good draughtsman, he already possesses two valuable qualifications for an archaeological assistant" (Cunningham 1880). While archaeological experience would no doubt develop over time, the demands of accurate record taking were of immediate importance to the survey. From this time onward, the photographic recording of archaeological sites became a central task of India's Archaeological Survey.

Limitations of the Photographic Record

The photographic documentation of Indian architecture in the late nineteenth century resulted in the most detailed

visual record of the archaeological and architectural heritage of any Asian country during the period, but it was far from being totally successful either in conception or in execution. At the very least, the work reflected a lack of clarity regarding what precisely photography might be expected to achieve in this field. This matter was the subject of some debate among scholars throughout the last half of the nineteenth century: Was photography meant to produce an illustrative sample of major building types—a gallery of representative masterpieces for use by scholars as reference material? Or was it intended to function as a more objective archive, with the aim of creating a comprehensive and detailed record of the material remains of a whole subcontinent, uncontaminated by popular views of scholarly fashion? Or was its most important use to provide an accurate record of structures, inscriptions, and works of art that were rapidly falling into decay or in imminent danger of destruction?

It is also worth noting that the threats of industrialization and urbanization to the historical built environment were of major concern even in nineteenth-century India. The distinguished archaeologist and photographer Henry Cousens, for example, noted when visiting the site of the ancient city of Chandravati in Gujarat in 1890 that almost all of the magnificent shrines and sculptures that had so impressed visitors since its European rediscovery in the early 1820s had, over the course of the previous decade, been broken up by railway contractors to make ballast for bridge foundations or burned to make lime (Cousens 1890).

During the late nineteenth century, the balance between the various points of view on the role of photography was constantly shifting, influenced by financial considerations, scholarly debate, and the development of archaeology from an antiquarian pastime into a formal academic discipline.

Aurel Stein's Photographic Legacy

In the course of three major expeditions to Chinese central Asia in the early decades of the twentieth century, the archaeologist Aurel Stein (fig. 3) compiled an extensive photographic record of his travels comprising several thousand images. Stein's use of photography in his work served several functions and forms a vivid reflection of the breadth of his scholarly interests and achievements. In addition to using photography to illustrate the course and content of his archaeological investigations, Stein employed it to document his geographic, topographic, and surveying work (Stein 1908; Stein, Mason, and Hunter 1923); to make records

FIGURE 3 Aurel Stein with Indian assistants and excavators at the ruined city of Kara-khoja, Xinjiang (Third Central Asian Expedition, 27 January 1915). British Library, APAC Photo 392/29 (242)



of his ethnographic research in the field; and, not least, to create a visual narrative to accompany the published accounts of his journeys.

As described above, the second half of the nineteenth century saw the creation by travelers, explorers, and scholars of a huge volume of visual records of ancient sites. Stein's use of photography is best viewed against this tradition of archaeological photography that had developed in the Indian subcontinent, in particular, through the Archaeological Survey of India, which had employed Stein when he first started to use the camera. It was within this framework that Stein's own archaeological, and indeed photographic, practice was grounded and formed.

Stein had first come to India in 1888 as principal of the Oriental College at Lahore in present-day Pakistan, but he soon became heavily involved in archaeological research and made a number of field trips during the 1890s, before joining the Archaeological Survey of India as superintendent of archaeology in the North-West Frontier Province and Baluchistan (now Balochistan province of Pakistan). It was while officially holding this post, between 1904 and 1910, that Stein undertook his second central Asian expedition (1906–8).

Stein had first taken up photography during his early field trips in the 1890s, receiving his initial training in the craft from his lifelong friend Fred Andrews, vice-principal of the Lahore School of Art and later his assistant in organizing and listing the collections brought back from central

Asia. He continued to improve his technical competence during his work with the Archaeological Survey of India, in which photography had occupied an important if fluctuating position for half a century, and it is clear that during this period, he absorbed a growing appreciation of its value as a documentary tool. In the course of his three most important archaeological expeditions to central Asia (1900–1901, 1906–8, and 1913–16), Stein used photography to record archaeological sites and finds, the landscapes and settlements through which he traveled, and the people whom he encountered.

Apart from his small and trusted team of Indian surveyors (who also received some basic photographic training), all of Stein's expeditions were of a largely solitary nature—a situation that certainly reflected personal preference as much as economic necessity. Despite Stein's logistical and administrative efficiency, allied to a formidable intellectual and physical energy that characterized all of his professional undertakings, some areas of his work were inevitably limited. The demands of archaeological fieldwork, exploration, mapping, and writing left insufficient time to create a comprehensive photographic documentation of individual sites. His photography of his major excavations at the sand-buried settlement of Niya, on the southern Silk Road, for instance, consists of general views of the area and some closer studies of excavated artifacts. While striving to give an overall impression of the site for future publication, Stein clearly had insufficient time to create a fully detailed photographic record of each stage of the dig.



FIGURE 4 Aurel Stein photograph of mural at a Buddhist shrine in Miran, Xinjiang (Third Central Asian Expedition, 21 January 1914). British Library, APAC Photo 392/29 (81a)

The breadth and technical quality of what Stein did achieve with the camera during his Asian travels are nonetheless remarkable. Although he kept abreast of the latest advances in technology, much of his photographic work was undertaken using heavy cameras and glass plates with relatively slow emulsions. The physical limitations of the number of plates that could be taken on long expeditions and the consequent need to ration their use were additional mundane factors influencing what could be achieved. Stein would certainly have acknowledged the value of a fuller record for the archaeologists, scholars, and conservators who followed in his footsteps. However, given the remarkably heavy workload of his expeditions, the additional physical and technical demands of photography should not be underplayed. Some flavor of these burdens can be appreciated by Stein's own account of his attempts to photograph the frescoes he discovered among the Buddhist shrines at Miran, on the southern Silk Road in present-day Xinjiang. Here technical difficulties were compounded by the bitter winter climate of the desert in January 1907:

To do justice to the harmonious and often faded colours of these paintings with a camera would have taxed the skills of a professional photographer working with special plates and appliances in his studio. But for an amateur like myself, the conditions under which the work had to be done were almost prohibitive. It was sufficiently difficult to squeeze myself

in my bulky fur kit into a position low and distant enough to photograph a frescoed dado just above the floor and on the curving wall of a passage barely seven feet wide. For days the dust haze raised by the violent winds made the light so poor that prolonged exposure was needed, with the attendant risk of seeing the result spoiled by the camera shaking in the gusts. To examine the correctness of the negatives so exposed would have required development of each plate on the spot. But in the intense cold still prevailing this could not be done at night without risk of the plate freezing while drying in the tent. In order to reduce the risk of total failure I laboriously took several complete rounds of the frescoes with varying light and exposure,—only to find in the end, when development became possible, some four months later, that my efforts had failed to secure an adequate record. (Stein 1912, 1:493–94)

The images Stein took of these murals, technically unsatisfactory though they may be, are now the only remaining evidence of these paintings, the originals having been destroyed in later rash and misguided attempts to remove them (fig. 4).

At Dunhuang itself, Stein's photographic documentation of the Mogao Caves was undeniably meager (figs. 5, 6), and it is clear that his other activities left insufficient leisure for the creation of a fuller visual record. That Stein himself was aware of the scholarly importance of such photographs



FIGURE 5 Aurel Stein photograph of shrines near the center of the Mogao Grottoes (Third Central Asian Expedition, 3 April 1914). British Library, APAC Photo 392/29 (105)

and of the shortcomings of his own work in this area is implicit in his remark that “the camera can be employed [at Dunhuang] with great archaeological profit for weeks if not months” (Stein 1907).

The very limited and selective nature of Stein’s photographic record of the caves at Dunhuang is evident when it is compared with that produced by the Russian expedition to Dunhuang led by Sergei Oldenburg in 1914–15. Among the members of Oldenburg’s group, which remained at the site for some six months, were artists, surveyors, topographers, and a photographer, Samuil Dudin. The inclusion of a photographer gave this expedition the opportunity to create a far more systemic documentation of the caves than Stein could have hoped to achieve. The final product of the Russian work



FIGURE 6 Aurel Stein photograph of caves opposite Hoshang’s quarters at the Mogao Grottoes (Third Central Asian Expedition, 3 April 1914). British Library, APAC Photo 392/29 (106)

comprises more than two thousand individual photographs, including a thorough record of the cave facades. For selected caves, as many as fifty views were taken to present a full record of both their structural formations and the paintings and sculpture that adorned them. The Oldenburg expedition’s photographic documentation of the Mogao Grottoes, taken more than ninety years ago, remains the most comprehensive record so far attempted, and the fact that it has not been superseded emphasizes how logistically complex, physically demanding, time-consuming, and often remarkably tedious such work can be. Regrettably, for the remainder of the twentieth century, this painstaking documentation remained largely inaccessible in the collections of the Hermitage Museum in St. Petersburg, although a representative selection of images has now been published (Fan Jinshi and Cai Weitang 2000).

The incompleteness of Stein’s photographic output was more than offset by the accuracy of the accompanying documentation: throughout his career, Stein scrupulously recorded every aspect of his photographic work in a series of uniform notebooks, listing date, subject, and other technical details (fig. 7). In contrast is the magnificent series of negatives made by the German expeditions under Albert Grünwedel and Albert von Le Coq to the Turpan region of the northern Silk Road between 1902 and 1914. While of superior photographic quality, these images are almost

Date	No. of Slide	Plate or Film	Time of Day	Light	Stop	Exposure	Subject, notes on lighting, etc.	No. of Negative
4/1/14	8	NW G22	9:30	br.	16	1/3	Ruins at entrance of S. group - afiq: seen from S.	good
	9	G22	10	br.	16	1/3	Interior of 2nd ruined mound top in S. group - afiq: top of (a tower)	ext.
	10	G21	12	br.	16	1/4	Chikka-kol ruins, N. group of I. seen from S.W.	ext.
	11	G11	1:30	br.	16	1/6	Chikka-kol I & II groups seen from E. across marsh	good over
4/1/14	12	G13	12	br.	16	1/6	View low N. from S. most top dome of G. N. group. Kosh gumbaz	good over
6/1/14 0157	2	SW	2	br.	16	1/2	Largest tomb III. N. group. Kosh-gumbaz, seen from SW	over ext.
0160	2	"	"	"	"	1/2	S. (smaller) group of tombs, Kosh gumbaz seen from SE.	over
0158	2	"	2:30	br.	16	3/4	Large tombs in SW corner of S. (smaller) group of Kosh-gumbaz seen from S.E. (Khalid)	ext.
8/1/14	8	"	1	br.	16	1/8	Ruins to SW of Chikka-kol seen from S.W. near Kao IV.	over
	9	"	1	br.	16	1/4	Ruin large, NW of Kao IV (labourers in room)	over
11/1/14 0179	3	"	1	br.	16	1/6	Kao I. ii & ruins N of it from Kao I. i	ext.
15/1/14	1	NW G34	1:30	br.	16	1/8	Toiyuk houses by tombs from SW. (houses in foreground)	
	2	G33	2:30	br.	11	1/2	Home of Niqadaya, street in Toiyuk	

FIGURE 7 Page from Aurel Stein's notebook documenting photographs taken at Kara-khoja and Toyuk, Xinjiang (Third Central Asian Expedition, November 1914). British Library, APAC Photo 392 Notebook 3 (1914)

entirely lacking in supporting documentation as to date, location, or subject. Their value to the modern researcher is consequently severely diminished.

Henry Cousens's Photographic Achievements

By the end of the nineteenth century, the importance of comprehensive visual documentation produced to rigorous standards was becoming recognized by a few farsighted individuals, most notably Henry Cousens in his work at the great Buddhist stupa at Sanchi, some 40 kilometers from Bhopal, in the Indian state of Madhya Pradesh. In order to photograph the extensive sculptural panels that adorn this World Heritage Site, Cousens built an elaborate wooden framework that allowed him to raise his camera parallel to each section and to photograph each individual relief without distortion and to a uniform scale. (A full description of his working method can be found in his *Annual Report for 1900* [Cousens 1901].) This task, which took Cousens and his team of assistants over two months to complete and which resulted in a collection of over 250 large-format negatives, remains a model of its kind. It further illustrates the financial and time

commitment required to produce fully satisfactory visual records of archaeological subjects. While such an approach has historically been the exception rather than the rule, it remains an enduring model of photography's unique value as a tool of record in its comprehensive scale, carefully planned organization, and technical quality.

Conclusion

Growing awareness of the unique documentary value of the photographic record has led to the accumulation of an immense and varied archive in the century and a half of the medium's existence. In many cases, photographs constitute the sole surviving visual record of structures and sites that have succumbed to time, neglect, misguided conservation, political events, human greed, and simple vandalism. For all its value, much of this existing record is frustratingly incomplete, often produced with little thought to the likely demands of future research or conservation. In addition, the technical limitations and expense of photography in its early days tended to work against the ideal of comprehensive documentation. For many important structures and sites,

which have changed immeasurably (both themselves and the surrounding environment) over the succeeding century, the incompleteness of the visual record represents a significant missed opportunity. While we pay tribute to the importance of the visual record created by pioneering archaeologists who first uncovered the riches of Buddhist art in central Asia, the shortcomings and often frustrating omissions in the surviving documentation cannot but reinforce the crucial importance of the photographic record both to present-day field-workers and to future scholars.

Advances in photographic technology—not the least of which is the recent development of digital media—have made an immense difference to what can be achieved in creating a photographic record. If the challenge to create full and comprehensive photographic records of archaeological sites from the moment of discovery, produced to agreed standards, were to be embraced by field-workers, there is little doubt that this would earn the gratitude of future researchers. However, the magnitude of the task of creation, organization, and dissemination of such documentation should not be minimized.

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Harps on the Ancient Silk Road

Bo Lawergren

Abstract: *One can derive a great deal of information on Chinese music from images painted during the first millennium along the Silk Road, including Dunhuang, especially if combined with Chinese texts. Long before the arrival of Buddhism in China, music held an important place in Confucian and Daoist ritual. With the arrival of Buddhism, its followers demanded no less, but they required instruments quite different from the ritual instruments used during the first millennium B.C.E.—bronze bells, stone chimes, and large drums. The instruments brought by Buddhists were light (lutes, harps, flutes, reed instruments, and small drums). Most survived in China, but harps (konghou) disappeared shortly after 1000 C.E. as Buddhism declined. One of the last depictions of harps is found in cave 465 at the Mogao Grottoes (thirteenth century).*

This paper attempts to compile what is known about these ancient instruments, information vital to conservators, art historians, instrument makers, and musicians who wish to revive earlier practice. Harps died out in China, but replicas are now played in several places, for example, the Dunhuang Academy, the Shanghai Conservatory, Jeonju (Korea), and Tokyo.

Although harps were not indigenous to China, they came to play an important role there during the first millennium C.E. after migrating along the Silk Road from India, Iran, and points farther west. Many types of Western instruments came the same way. All were lightweight and could easily be transported on camels, horses, and other beasts of burden. Images of these instruments were painted on walls in caves and grottoes on the Silk Road, notably at Dunhuang, and the images reveal shapes and playing positions of instru-

ments, their formation into orchestras, and their cultic and societal function. The information is occasionally supplemented by Chinese texts.

At the beginning of the first millennium B.C.E., Chinese ritual relied mostly on heavy bronze bells and weighty stone chimes. Both were indigenous and lacked parallels in the West. There were few if any string instruments (zithers may have been used, but there is no information). At the same time, Chinese music employed an extensive variety of drums, many of them large. Their massive size confined them to fixed stationary positions during performance.

In ancient western Asia, for example, in Mesopotamia and Iran (Lawergren 1995, 2001), the situation was different. From the earliest documented time, string instruments dominated, with harps, lyres, and lutes already being played in the third millennium B.C.E. Not only were string instruments more numerous there than in China, but they also had a greater diversity of shapes. Moreover, players were sometimes depicted standing and were anything but stationary.

None of these types of light instruments existed in China; conversely, no zithers were known in the West. Western countries were unaware of other Chinese favorites, such as heavy bells and stone chimes. Most Western drums were small, unlike Chinese ones.

This situation changed when the Silk Road opened a window toward the West and its ample supply of string instruments. Buddhist travelers on the Silk Road not only introduced their faith to China but also brought light instruments for their rituals.

The sacred texts of Buddhism compelled China to import Western instruments. Mahayana sutras were written as if Western instruments were the norm. Texts recounting

the life of Siddhartha, the young prince who grew up to become the Buddha, describe how in his father's palace the prince enjoyed the company of the female musicians employed there, and he liked listening to their harps, lutes, flutes, and drums (Lawergren 1994a: 226, 227–28). A still grander orchestra described in the Lotus Sutra includes drums, horns, conch shells, pipes, flutes, zithers, harps, lutes, cymbals, and gongs (trans. A. Berkowitz, pers. com.; Watson and Kumarajiva 1993: 40). Individuals who assembled such orchestras—the sutra promised—would attain Buddhahood.

Music was also featured in the sutras that describe future delights of paradise awaiting devout Buddhists. There would be “music, concerts, and musical instruments,” and worshippers would have access to an assortment of “materials, beginning with flowers and ending with musical instruments” (Cowell et al. 1969: 53). Since the music of Western instruments was a pleasure approved for the afterlife, why not enjoy it already here on earth?

Many light instruments were introduced into China, but this paper focuses on harps. Before Buddhism entered China, harps were unknown there; after the first millennium C.E.—when Buddhism sharply declined—harps disappeared for good. One of the last depictions of a harp is in Mogao cave 465 of the thirteenth century. Later images exist, for example, in Qiu Ying's large hand-scroll *Spring Morning*

in the *Han Palace* (Fong, Watt, and Guo li gu gong bo wu yuan 1996: pl. 203 [central section]). It was painted in 1540 but seems to depict much earlier conditions.

Harps in Ancient China

The harp (*konghou*) was the quintessential Buddhist instrument of China. These instruments had several distinct forms, most of them depicted in the wall paintings of grottoes and caves near Dunhuang. I recognize four categories of harps: arched, angular, vajra, and steppe. The first two are the oldest. The arched harp arose in the Iraq-Iran region around 2900 B.C.E. and was replaced around 1900 B.C.E. by the angular type, which soon became ubiquitous in western Asia, Egypt, and the eastern Mediterranean region. But the arched type had apparently already gained popularity in India, during the Indus civilization. Figure 1 depicts an arched harp and an angular harp based on Egyptian depictions (Lawergren 2001: figs. 2m, 3g), but their structure is similar to that of harps illustrated millennia later in China. In other words, harp designs remained stable for extraordinarily long durations. Arched harps (fig. 1a) have a long, curved rod projecting out of the short side of the sound box. Strings are attached to tuning collars, which, when rotated around the rod, tune the strings. The other string ends are tied to a narrow rib in contact with the membrane that covers the

FIGURE 1 Harps from ancient Egypt: (a) arched harp (1340 B.C.E.); (b) angular harp (early eighth century B.C.E.).

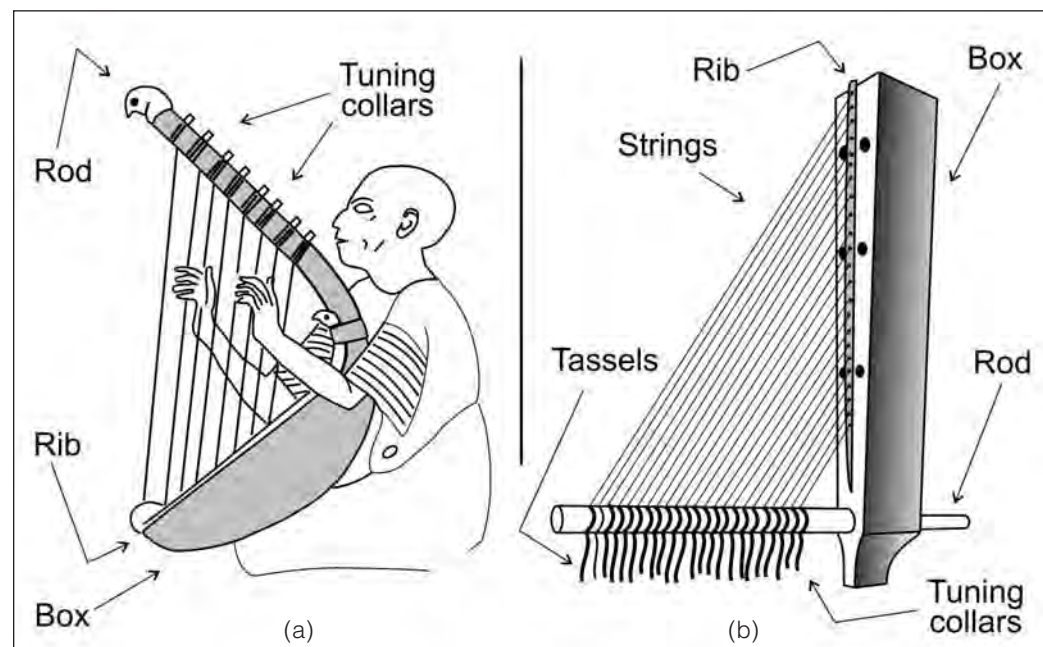




FIGURE 2 Depiction of an arched harp from the Mogao Grottoes (cave 327).

box. Angular harps (fig. 1b) have the same individual components, but they are arranged differently. For example, the rod joins the box perpendicular to its axis through a wide hole, and the box is placed above the rod rather than below it.

During the period immediately prior to the opening of the Silk Road, arched harps existed only in India, and the angular harp in Iran and regions farther west. Most Silk Road sites depict only angular harps; the largest exception is at the Kizil grottoes (near Kucha, Xinjiang Autonomous Region, China), where 75 percent of the harp images are arched (Lawergren 1995: table 1, no. III 1). At the Mogao Grottoes near Dunhuang, 10 percent of the harp images are of the arched variety, the highest number after Kizil. Farther east into China there were no arched harps. Since the two instrument types came from distinct geographic regions, the percentages reveal distinct musical influences. The large percentage of arched harps at Kizil indicates substantial Indian influences. A dominance of angular harps points to influences from Iran or regions farther west.

Arched Harps

Before the Silk Road became active, arched harps were found only in India. From there they migrated north into Gandhara (near present-day Kabul, Afghanistan), Bactria (near Balkh, northern Afghanistan), and Sogdia (near Samarkand, Uzbekistan). An example from Panjikent (western Tajikistan) is a small, portable harp with seven strings and a bird's head at the upper end of the curved rod (Lawergren 1995: fig. 3c). What is unusual about this

depiction is that the player holds a rectangular plectrum in her left hand and damps the strings with her right hand, a reversal of normal hand positions. Players depicted in wall art in Kizil and Bezeklik (about 30 kilometers east of Turpan, Xinjiang) pluck with their right hands. Their harps have slender rods that swoop out of the box in long arched curves.

The arched harps depicted in two caves at Mogao, cave 327 (fig. 2) and cave 465 (shown in Blunden and Elvin 1983: 111), were drawn nearly a millennium later than those at Kizil. These represent the most easterly diffusion of arched harps (Lawergren 1995: 270, table 1, No. 1).¹ The Dunhuang harps and the one in cave 438 at Bezeklik (Yao Shihong 1983: 243) are decorated with bird heads, but these are not unique. Animal heads on arched harp rods are also present at Panjikent (Lawergren 1995: fig. 3c) and two millennia earlier in Egypt (fig. 1a).

The unusually late painting (thirteenth century) of the arched harp in Mogao cave 465 (Blunden and Elvin 1983: 111) contains Tibetan traits. Although the harp is not clear, the S-shape of the rod is plainly visible. A similarly shaped rod was used on another Tibetan harp, that at Alchi (see below).

Angular Harps

The history of angular harps is more complex than that of arched harps. Until about 550 C.E. angular harps maintained the sturdy construction acquired around 1900 B.C.E. in Mesopotamia (fig. 1b). But after 550 C.E. they became instruments of great delicacy and mechanical elegance. The box

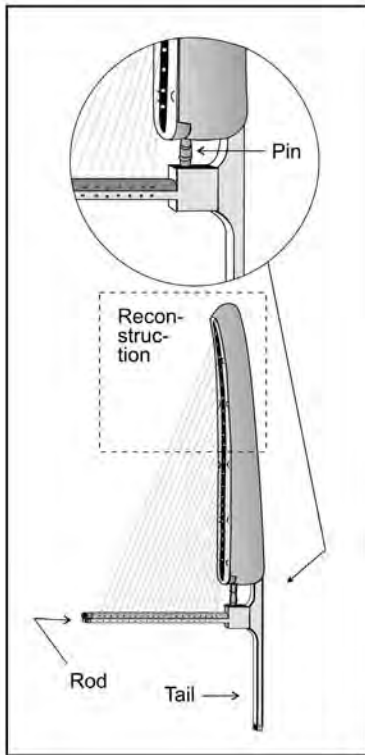


FIGURE 3 An extant cantilever harp in the Shosoin Treasure House in Nara, Japan.



FIGURE 4 In this image from Khocho, 50 kilometers southeast of Turpan, the player's arm obscures the pin of his harp, making it difficult to determine if it is an angular harp or the cantilever variant.



FIGURE 5 Depiction of a cantilever harp from the Mogao Grottoes (cave 156).

no longer reached down to the level of the rod, and the two parts could no longer support each other. Instead, the rod was attached to a slender tail that descended from the box. To achieve balance, a pin was inserted between the box and the rod. In other words, the rod had become a cantilever projecting beyond a fulcrum (the pin) and supported by a balancing force from the tail. Figure 3 shows an extant harp in the Shosoin Treasure House in Nara, Japan, which clarifies this construction (Lawergren 1995: fig. 4f). It is dated ca. 800, but earlier examples are depicted in Iran and on the Silk Road. I shall call this variant of the angular harp pattern a “cantilever harp.” Elegance was gained by the new design, but strength was sacrificed. Unfortunately, it is sometimes difficult to identify such harps in paintings because the player's right arm may obscure the pin (e.g., fig. 4).

At Dunhuang one finds harps with and without a fulcrum pin, as well as some harps that are difficult to classify. At first glance the harp in figure 5 seems an obscure type, but

the spacing of box, rod, and tail suggests they were joined in a cantilever design.

Angular harps became common throughout China. Buddhist orchestras had them, and so did entertainers, virtuosos, and poets. During the Sui and Tang dynasties (581–907 C.E.), female central Asian musicians were in especially strong demand in China, and they frequently modeled for terracotta and porcelain figurines (e.g., Lawergren 1995–96: fig. 10). Among poets favoring the harp, we note Li He (791–817), active in the Tang dynasty capital of Chang'an. One poem describes a harp concert given by the court musician Li Ping (Frodsham, David, and Li Ho 1970: 10–11). The air is cool; it is an autumn day with low clouds and dew on the ground. The poet sees the clouds move nearer to the musician and imagines they wish to hear the harp better. But rain begins to pour, and the harp moans. When a rainbow appears, it is as if the sound had shattered jade and vaporized minerals, which spread across the sky. Earth and heaven quiver, fish jump, dragons

dance, phoenix-birds shriek, and the light melts before the city gates of Chang'an. Nature and harp had become one.

Other Harps

A third type of instrument, the vajra harp, appeared in China at the time when arched and angular harps were about to disappear, shortly after 1000 C.E. Most of the evidence for this harp comes from Japan, but similar harps are shown on images not far from Dunhuang. Recently a fourth type of instrument, the steppe harp, has been brought to light by archaeologists working in Xinjiang—again, not far from Dunhuang. This harp, however, appeared before the opening of the Silk Road and does not seem to have penetrated east of Xinjiang. Like other harps, both types came from the West.

Vajra Harps

A typical early vajra harp is shown in figure 6. It was drawn about 1125 on a raigo painting (a type of Japanese painting that depicts the descent of Amida, the Buddha of Infinite Light, accompanied by scores of musicians) that now hangs in the Reihokan Museum, Koyasan, Japan (Lawergren 2008). The instrument has a flat, cylindrical, and horizontal body that supports an undulating vertical rod holding six nearly vertical strings. The assembly is crowned by a three- (or four-) pronged vajra (an object representing a thunderbolt). The vajra, an implement used in esoteric Buddhist sects in China and Japan (Louis-Frédéric 1995: 63–67), lends a sacred aura to this harp. On later raigos (twelfth–seventeenth century) the body and rod of the vajra harp are greatly simplified and do not appear to be functional. The cylindrical body has been replaced by a horizontal stick, and the strings have disappeared, but the vajra remains. Evidently, the religious symbolism of the vajra was more important than the musical efficacy of the instrument. Thus this was a symbolic harp rather than a musical one. There are no vajra harps in the Shosoin Treasure House, a place otherwise well supplied with musical instruments of the late first millennium. The absence is hardly surprising.

In Japanese Buddhism, raigo paintings express a belief in the Pure Land, a far-off region that offers marvelous delights to the righteous Buddhist after death. It is a paradise, and Buddhist paintings show it with sumptuous buildings, spacious gardens, refreshing pools, large orchestras, pliant dancers, and blessed inhabitants. Buddha Amida, who presides over it, is attended by two bodhisattvas, Seishi and Kannon. Raigo paintings show the three descending to receive the spirit of a deceased man and bring it back to the

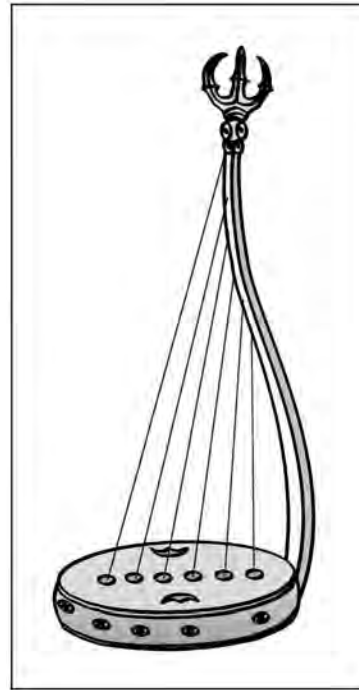


FIGURE 6 Depiction of a vajra harp on a raigo painting. (Reihokan Museum, Koyasan, Japan)

Pure Land. The occasion is of great musical interest as musicians accompany Amida, and their instruments—including a vajra harp—are usually carefully drawn. This type of painting was unique to Japan—as was the harp. However, evidence of the existence of a variant of the vajra harp is found in China (discussed below).

Vajra harps were depicted centuries before one appeared on the Koyasan raigo, namely, on the Diamond World mandara, or *kongokai* (Lawergren 2008), which is a pictorial representation of concepts and doctrines fundamental to Shingon and Tendai Esoteric Buddhism (ten Grotenhuis 1999: 33–57, figs. 20, 23, pls. 6, 7). The earliest surviving polychrome copy of this mandara, from the ninth century C.E., is kept in the Toji temple in Kyoto, but later copies are very similar. The vajra harp is placed at the upper left side (ten Grotenhuis 1999: 80–86), in a section that contains many other objects outfitted with vajras. Presumably, the harp was given its vajra because of the environment on the mandara. The original Diamond World mandara had been given to the Japanese monk Kukai when he visited the Chinese capital Chang'an in 804–5 (Lawergren 1995: 247). Many copies of the mandara have survived in Japan but none in China. The vajra harp is the only musical instrument represented on the mandara. It rests unplayed on a lotus pod. So even here it is a symbol rather than an active instrument.

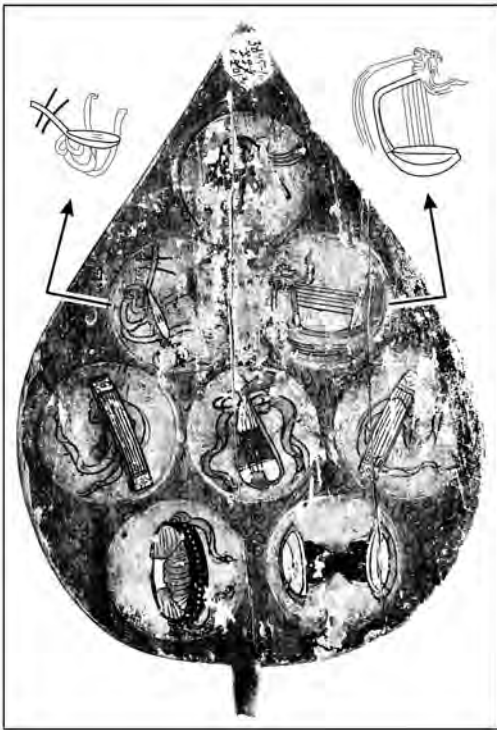


FIGURE 7 Musical instruments depicted on a wooden plate from Kharakhoto, Inner Mongolia. Arrows point to a phoenix harp (right) and an arched harp (left). State Hermitage Museum, St. Petersburg, Russia, inv. no. 3845-1a

As mentioned earlier, a related instrument—without the vajra—was depicted in central China and in regions farther west around the beginning of the second millennium C.E. A comprehensive Chinese treatise on music published in 1104 C.E. by Chen Yang (1979; Lawergren 1995: fig. 3F) illustrates this harp, but a phoenix head replaced the vajra. The alteration replaces Buddhist associations with ancient Chinese ones. Quite likely, Chen Yang's instrument and the vajra harp had a common source in central China or west of it. The surmise is supported by two further examples, both from the West. The first comes from Kharakhoto, western Inner Mongolia, which at the time (1000–1200) belonged to the state of Xixia, where Buddhism was the state religion (Piotrovsky 1993: 55–57). The second is in a Buddhist temple at Alchi, about halfway between Leh and Khatatse in the Indian state of Jammu and Kashmir. Russian excavations at the Kharakhoto site produced a thin wooden plaque carved and painted to look like the leaf of a bodhi tree (Zuber 1940: pl. 6). The plaque, dated 1200–1400, has sixteen images of

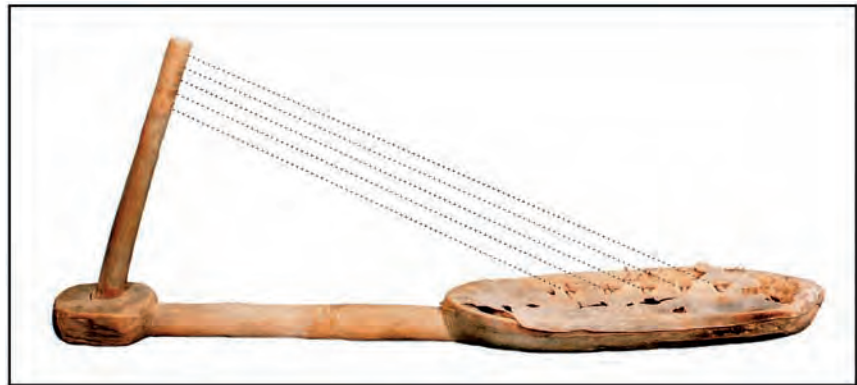


FIGURE 8 An extant steppe harp excavated near Shanshan, Xinjiang, China.

instruments without players,² and the instruments hover in the air decorated with ribbons. Figure 7 shows one side of this plaque on which there are two harps, one an arched harp, the other a phoenix variant of the vajra harp. A painting found at the Alchi site (dated 1000–1200) shows a harp with a sharply bent rod reminiscent of Chen Yang's phoenix-variant vajra harp (Goepper et al. 1996: 44).

Considering the wide geographic distribution of this variant of the vajra harp—between Japan and the Indus—and its close association with Buddhism, one would not be surprised to find it at Dunhuang. But it has not yet been reported there. Indeed, this instrument has only now been recognized as a separate type of harp with international spread.

Steppe Harps

A fourth category of instrument is the steppe harp, which I have so named because several well-known examples had been found buried at the edge of the vast Eurasian steppe zone. They belong to the wider category of horizontal angular harps that were first depicted in Mesopotamia around 1900 B.C.E. and continued on Assyrian monuments 850–650 B.C.E. Recently steppe harps were found in tombs excavated in the extreme western part of China, the Xinjiang Autonomous Region. The tombs date to the first millennium B.C.E., that is, before the Silk Road became active. About five harps have been recovered, some in excellent condition, as seen in figure 8 (Lawergren 2003: 89–91, fig. 11). Since their shape is reminiscent of the Assyrian harps, steppe harps appear to be the result of an eastward migration. Although not part of the “classical” Silk Road migration of the first millennium C.E., steppe harps nonetheless show that Xinjiang

lay open to Western musical influences centuries earlier. Of the different harp types discussed here, steppe harps are the only ones that do not seem to have spread east of Xinjiang.

Some of these harps were found in the dry sands at Zaghunluq cemetery in Qiemo county, Xinjiang. This remote site lies on the southern route of what would become the Silk Road around the Takla Makan (Wang Zichu 1999: 60). A similar harp was recently found at Yanghai in Shanshan county on the northern route.

These instruments are similar to three long-known extant harps. One was well preserved in a frozen tomb at Pazyryk in the Altai mountains in Siberian Russia; it is dated to 350 B.C.E. (Lawergren 1990). Another harp was poorly preserved in a tomb at Bashadar (near Pazyryk) with a similar date. The third, belonging to the Samartian culture, was found at Olbia on the Black Sea (Bachmann 1994). It dates to 75–100 C.E. (O. Simonenko, pers. com. 2005). Horizontal angular harps, some with nine strings (Lawergren and Gurney 1987: 51), were also depicted in royal Assyrian art around 900 to 600 B.C.E. (Rashid 1984: figs. 137, 146). It is known that some Eurasian peoples, for example, the Scythians (Lawergren 2003: 90), worked as mercenaries in the Assyrian army, and I surmise such equestrian people brought the harp to Xinjiang. The small size and light weight of these harps facilitated this migration. Steppe harps were not associated with Buddhism, and tombs with steppe harps contained no Buddhist paraphernalia.

Conclusion

Harps were among the many light instruments brought into China from the West by Silk Road travelers, many of whom passed through Dunhuang. Their instruments are shown on the walls of Dunhuang caves and grottoes, and the depictions provide an excellent source for musical study. But harps are also found in archaeological excavations in the nearby Xinjiang Autonomous Region and in depictions over a wider area, including Japan, Inner Mongolia, and northern India.

The Chinese term for harp, *konghou*, suggests that only a single kind of instrument existed, but so far four types have been recognized: angular, arched, vajra, and steppe harps. Although harps died out in China around 1000 C.E., the tradition is now being revived in several places. At present, replicas of vertical angular harps are owned and promoted by the National Theatre in Tokyo and by MBC Television in Jeonju (Korea).

Notes

- 1 However, an orchestra from Upper Burma was presented to the court at Chang'an in the year 802 (Picken 1984: 245). It included nineteen different types of instruments, including two phoenix-headed harps (*feng shou konghou*). Animal-head decorations were characteristic of arched harps (e.g., fig. 2).
- 2 In China these instruments are called *bu gu zi ming* ("no drum-beating, but sounding on its own").

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Stein and Trinkler on the Rawak Vihara: A Mandala Style Moves East

Fred H. Martinson

Abstract: *Since 1995, as part of a series of presentations to the Southeast Conference of the Association of Asian Studies, I have been exploring several ideas about how Buddhist mandalas are expressed in Chinese art history. In researching this topic from 1999 to the present, I have become intrigued with one site that may be mentioned by Xuan Zang (traveled 629–45), Rawak, which is located just northeast of Khotan. Little seems to have been done on this site since Sir Aurel Stein’s treks there at the turn of the twentieth century; an exception is Emil Trinkler, a German, who traveled there in the late 1920s and published several books on his discoveries in the early 1930s. His writings give us rather conclusive dates for Rawak. The shape of its stupa illustrates my theme of mandalas, and I use some of the images in the best condition from the finds of Stein (91 statues published) and Trinkler (31 statues published) to examine how styles from Indian areas came early to the Takla Makan. Brief mention of one or two of the half dozen other stupas close to Khotan provides the context.*

The work presented here is about the Rawak Vihara, a Buddhist shrine located just northeast of Khotan (modern name, Hotan) that probably dates to some time between the third and fifth centuries C.E. This area was an ancient Buddhist kingdom on the branch of the Silk Road that ran along the southern edge of the Takla Makan Desert in western China’s Xinjiang Uyghur Autonomous Region. The central feature of the shrine was a tall domed stupa, which is a reliquary representing the passing, or nirvana, of the Buddha; it was used for circumambulation—or movement around the symbolic remains of the Buddha—in religious rituals. The stupa sat in the center of a square courtyard that was bordered by inner and outer walls that may have been

roofed and served as a monk’s quarters. *Rawak* means “high mansion” in Uyghur, and *vihara* is an Indian Sanskrit term meaning “the dwelling places of monks.”

Rawak can only be understood from the writings of two Western explorers: the Hungarian-British archaeologist Sir Marc Aurel Stein (1862–1943), who made two expeditions there at the turn of the twentieth century (Stein 2001: 304), and the German geologist Emil Trinkler (1896–1931), who explored the area during his central Asian expedition of 1927–28 (Gropp 1974). Trinkler’s expedition appears to have been the last one to work at Rawak, which today is nearly forgotten. The photographs and documentation produced by these two explorers are all that remain of Rawak. The sands of the Takla Makan Desert have reclaimed nearly everything. Reaching Rawak is arduous, even today. One modern guidebook to the region states: “The buried cities of the Khotan region explored by (Sven) Hedin and Stein are as inaccessible as ever. . . . Rawak is about 90 kilometers (56 miles) from Khotan. There are no roads into the desert, necessitating well-planned camel expeditions” (Bonavia 1990: 317).

Around 1996 Richard Bernstein of the *New York Times* and *Time* magazine retraced the steps of Xuan Zang, a famous Chinese Buddhist monk who had visited Rawak during his journey from China to India and back between 629 and 645. Bernstein writes:

A jeep took us north into the desert, which was a maze of under-construction irrigation canals. When we could go no farther in the jeep, we hiked about two miles through sand dunes to the stupa. It wasn’t much—a mud pedestal of baked brick atop a broader circular mound in which you could still see the

indentations of former doorways. All of it was within a square arena surrounded by a squat retaining wall, while all around the dunes undulated under the wind. The style is Gandharan. (2001: 313–14)

In the 1990s NHK (the Japan Broadcasting Corporation) produced a twelve-part program titled *The Silk Road* (Tamai, Webster, and Kitara 1990). The aerial photography for the Khotan segment shows that the Rawak Vihara is indeed filled with sand to the tops of the walls that Stein and Trinkler found, but it is interesting that both the outline of the walls and the top of the stupa are still clearly visible.

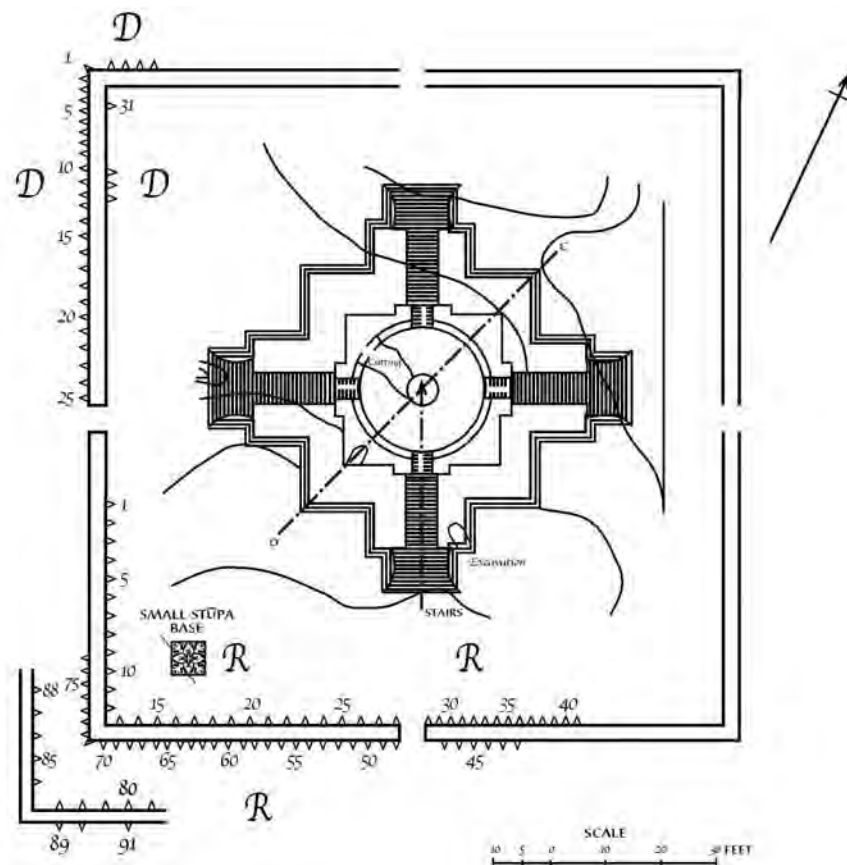
Layout of the Rawak Vihara

Figure 1 shows the layout of the Rawak Vihara. This is a composite plan I based on drawings made by Stein and Trinkler. The numbering refers to the location of sculptures identified by Stein (R grouping) and by Trinkler (D grouping).

The stupa itself is built on a 78-foot-square (24 m²) base and is about 31 feet (9.5 m) high. Extending out from the stupa are arms of stairs. The arms are bisymmetrical and in the form of a *visva-vajra*—a crossed vajra, which is a ritual device with prongs on each end. The vajra represents a diamond or thunderbolt, both of which are equated with the immutability of Buddhist doctrine. The stairways extend outward from the center of the stupa about 39 feet (12 m), and the stairs are 14 feet (4.3 m) wide.

The two sets of walls that surrounded the courtyard were penetrated on each side by gateways. The inner and more complete set of walls measured 109 feet by 130 feet (33.5 by 40 m). Only a small corner of the outer wall existed at the time of Stein's and Trinkler's visits (see fig. 1, bottom left). The outer walls would have formed a corridor about 9 feet (2.7 m) wide with the inner walls, and thus the outer walls would have measured 127 feet by 148 feet (39 m by 45.5 m). In the layout of Rawak the inner and outer walls are set back from the stupa on each side of the courtyard, creating the same design that is used in two-dimensional mandalas.

FIGURE 1 Composite plan of the Rawak Vihara based on Stein and Trinkler. Numbers indicate sculpture locations identified by Stein (R grouping) and Trinkler (D grouping). © Fred H. Martinson



Merriam-Webster's Collegiate Encyclopedia (2000: 1006) defines *mandala* as “a diagram representing the universe, used in sacred rites and as an instrument of meditation.” A mandala may be painted on paper or cloth, drawn on the ground, or made of bronze or stone. Mandalas often emphasize the four directions; they are placed in the center of a square or circle with statues of buddhas and other deities placed appropriately at a given direction. Mandalas may also be sculptural groups, layouts of cities, or even features in a landscape used in a religious context. In other words, some of these sacred representations may be large enough for a devotee to literally participate inside and be a part of the mandala.

Statuary at Rawak

Stein and Trinkler found large statues, usually life-size and sometimes twice life-size, inside and outside both sets of walls at Rawak. Most of the statues are of the Buddha, but some are of bodhisattvas, or “enlightenment beings” who postpone their buddhahood to save all sentient beings on earth. A few of the statues have identifiable iconographies (religious meaning), discussed below, but most cannot be specifically labeled. For this reason it is not possible to suggest an overall iconographic program for the site.

Figure 2 shows the best examples of what much of the sculpture looked like when Stein visited the Rawak Vihara (Stein 2001: fig. 66).¹ These statues are found along the exterior south corner of the inner wall and are numbered R66–74 on the Rawak map (see fig. 1). If this amount of sculpture was present on both interior and exterior sides of the inner wall surrounding the stupa and if there was an equally decorated outer wall all the way around, this must have been a most impressive monument. Based on the ninety-one sculptures Stein found and the additional thirty-nine that Trinkler found, we can estimate that five hundred or more statues at one time adorned the Rawak Vihara, probably in a definite Buddhist program or iconography.

Gandharan Style

The plan of the Rawak Vihara conforms to the bisymmetrical type seen in many structures at the Buddhist university at the Taxila archaeological site in the area of Gandhara in Kashmir (politically today, Pakistan). Such a plan would have been the origin of the mandala concept for Rawak and for many points east. Most of the buildings at Taxila are



FIGURE 2 Ruins of colossal statues along the exterior south corner of the inner wall of the Rawak Vihara (remains of outer wall in foreground). Photograph from the Stein Library, Library of the Hungarian Academy of Sciences, Budapest

dated to between the third and fifth centuries C.E. Indeed, the rulers of the Khotan area in China came from Gandhara. For an architectural comparison with the Rawak stupa and even its type of source, see the stupa of Bhamala Monastery at Taxila, which is dated to the fourth or fifth century C.E.²

Gandhara often brings to mind the area of the much earlier Greek kingdoms established by Alexander the Great in his easternmost advance into Asia between 337 and 325 B.C.E. Because of his conquests, there is a kind of Greco-Roman art style in sculpture and in the few surviving paintings that was mixed with local, Indian styles, especially with Buddhist subject matter. That style is called “Gandharan” after the region. It is this style, showing Greco-Roman influences on the art of the southern Silk Road, that was dominant, including at the site of Rawak.

Dating Rawak

A remaining question is, can we date the construction of Rawak? Trinkler dates the Rawak Vihara in this passage from his writings:

Rivers often submerged the southern border of the sea of sand during extraordinary floods. This is proved by extensive clay deposits that can often be traced deep into the heart of the desert. A section near the famous Rawak stupa showed me that such an inundation had

taken place here after the third–fifth centuries A.D., because the corresponding culture deposits of pottery debris, Chinese coins, bones, and beads are buried below the clay layer. These layers were deposited during an inundation by the Yurungqash Darya [now called the Khotan Darya, the river that flows through the town of Khotan]. The old dry bed of this river can still be seen some 4 miles to the east of the ruin. After that high flood the river changed its bed, shifting it some 12 to 14 miles to the west. (1930: 512–13)

What is important about this statement is that Trinkler has dated Rawak to a time between the third and fifth centuries C.E. These are precisely the dates for many of the buildings at Taxila mentioned above. Thus the building of Rawak is nearly contemporary with its Gandhara sources, suggesting a mandala style moving to the east.

Xuan Zang: An Early Traveler to Khotan

Xuan Zang, an eminent and learned Buddhist monk, as well as religious adviser to the emperor, left China in 629 C.E. for India to acquire original Buddhist sutras (scriptures) and a more comprehensive knowledge of Buddhism’s tenets and practices. He was gone for sixteen years, returning to the Chinese capital at Chang’an (the present city of Xi’an) in 645. Since he returned to China on the southern Silk Road, he visited the Khotan area and possibly Rawak late in his journey. When he returned home, he wrote an account of his adventures titled *Xiyouji*, or *Journey to the West* (Xuan Zang and Beal 1969).³

Xuan Zang seems to have traveled north and east from Khotan to the area of the early temples: Vaisravana Temple (p. 311), Vairochana Temple (p. 312). My investigations turned up new information about Rawak in Xuan Zang’s writings.

Near the end of his book, Xuan Zang has a chapter on Khotan.⁴ In it, he discusses a legend of the exile of a tribe from Taxila in Gandhara to Khotan by the great Indian king Ashoka (ca. 269–232 B.C.E.). This tribe traced its ancestors to the deity Vaishravana, Guardian of the North. The first king was a Buddhist who raised a Vaishravana temple and statue to his ancestors. The king was Buddhist and a patron of Buddhist art.

Xuan Zang states that east of the capital Khotan are the ruins of a town called Pima—Pi-mo, probably near Yutian (Keriya)—where there was a 20-foot-high (3 m) statue of a standing Buddha in sandalwood (Xuan Zang and Beal 1969:

324 n. 72). A look at the map of Khotan inside the back cover of Stein’s book (2001) shows that the Rawak Vihara is indeed located both east and north of Khotan. Furthermore, the Buddha statue may be related to a legend, recounted by Xuan Zang, that when the Buddha reached nirvana, the statue on its own flew to the north to “Ho-lo-lo-kiā” (*Heluoluojia* in modern Chinese transliteration), which is identified as “Raga” or “Raghan” or “Ourgha” by Samuel Beal in a footnote to his translation of the *Journey to the West* (Xuan Zang and Beal 1969: 322–23 n. 69).

“Rawak” was a term used by the Uyghur *turdi* (local treasure hunters) when Stein visited (Xuan Zang and Beal 1969: 304). Even the conventional use of sounds might make it a Turkish (Uyghur is a Turkish language) version of Xuan Zang’s Raga or Raghan. I propose, then, that the Pima ruins with the sandalwood Buddha that Xuan Zang describes are those of the Rawak Vihara. If this is true, Rawak is a central Asian site given by Xuan Zang that we can identify today. However, only two centuries after Rawak was built, Xuan Zang encountered a sand-buried monument. The sands of the Takla Makan had already reclaimed both Rawak and Khotan.

Rawak Sculpture Discovered by Stein and Trinkler

As noted above, the ground plan of Rawak is in the shape of a mandala. All the sculptures at the site were placed on the walls around the stupa, thus giving them a place in the mandala. A few selected photographs of these sculptures are described below, with notes giving the photographic source information.

Stein’s Discoveries

In figure 1 Stein’s sculpture discoveries are the numbers in the R grouping found on the southwestern and south walls at Rawak. Each sculpture described below is identified with its R number so that it can be located on the figure.

Colossal Buddha with Abhaya-mudra (R1). This statue (fig. 3) gives the best general idea of the scale and type of sculpture that Stein encountered (see Stein 2001: fig. 69). The buddha with Abhaya-mudra, a hand gesture meaning no fear (although the arm is missing), is the tall, headless sculpture to the extreme right in the photograph, behind one of Stein’s workers (second person from the right). Since this sculpture measures 5 feet 3 inches (1.6 m) from its feet to just below the bent elbow (arm missing), it is clear that this buddha was



FIGURE 3 A headless buddha with Abhaya-mudra (right) and a life-size bodhisattva (left) at the Rawak Vihara. Photograph from the Stein Library, Library of the Hungarian Academy of Sciences, Budapest

over 3 meters high. The abundant, congruent folds of clothing are in a Greco-Roman manner known as Gandharan style, as described earlier.

Bodhisattva (R4). To the extreme left in figure 3 is a life-size bodhisattva that Stein (2001: 419) describes as being about 6 feet (1.8 m) high. The figure is dressed differently than the previous statue; he wears the garments of a prince (and note the jewelry on his chest). A bodhisattva is a savior being, a potential buddha, just as was the historical Buddha (Siddhartha Gautama, ca. 563–483 B.C.E.) before his enlightenment. The head fell off the statue after this photograph was taken and can be seen on the ground in another of Stein's photographs (2001: fig. 61; not included here). Stein brought back the head of this statue for the British Museum and published a black-and-white photograph of it in his book *Ancient Khotan* (2001: pl. 81).

Seated Buddha (R11). The seated buddha, lower left in figure 4, is in yoga asana, that is, seated in the pose of a meditating yogi (see Stein 2001: figs. 62, 62). This is unusual among the Rawak statues, as most are standing figures. Note the *dhyana-mudra* (hand position of meditation) that is associated with Amitabha, the buddha of the

west. Such directional buddhas would literally have their appropriate place in the mandala-stupa, on the west side in this case. The surviving whitewash over an entirely smooth body is a primer that suggests this was a colorfully painted statue, as supported by the paint flecks found by Stein and Trinkler.

Additional Sculptures. Some of the most extraordinary and complex statues must have been the two colossal buddhas (R12 and R13) located at the south corner of the inner wall around the Rawak stupa (Stein 2001: figs. 63, 64). Unfortunately, these statues have survived only from about the knees down. Behind each statue is what Stein calls a "vesica," meaning a *vesica piscis* (an Italian term meaning an aureole, nimbus, or mandorla), and within each vesica there are many smaller, mold-made buddha figures (up to about 36 cm long). The aureoles behind these buddhas are 2.3 meters across. The aureole of R12 is visible in figure 4, behind the seated buddha (R11) described above.

Trinkler's Discoveries

Trinkler's expedition furnished us with additional images of the sculpture at Rawak. In figure 1, Trinkler's discoveries are the D group of numbers along the northwestern and western walls. In general, his photographs are closer up than Stein's



FIGURE 4 Seated buddha, lower left, at the south corner of the inner wall of the Rawak Vihara. Visible behind this statue and slightly to the left is the aureole (of a partial buddha) containing small buddha figures. Photograph from the Stein Library, Library of the Hungarian Academy of Sciences, Budapest



FIGURE 5 Head of the Vairocana with Wavy Hair from the Rawak Vihara. Metropolitan Museum of Art, Rogers Fund, 1930 (30.32.1)



FIGURE 6 Head of the Vairocana with Brow Depression from the Rawak Vihara. Metropolitan Museum of Art, Rogers Fund, 1930 (30.32.3)

and provide more detail. The photographs also convey more iconographic detail.

Buddha statues photographed by Trinkler with specific iconography include the Vairocana with Wavy Hair (D17)⁵ and a similar statue, the Vairocana with Brow Depression (D19).⁶ Vairocana is often called the cosmic buddha and is found in the center of many mandalas surrounded by four buddhas representing the four directions. The heads of these two statues, shown in figures 5 and 6, respectively, are in the Metropolitan Museum of Art and are thus missing the distinctive *dharmachakra-mudra* (turning of the wheel of the law) of the smaller buddha figures in the elaborate aureoles that were behind the statues at Rawak.

Conclusion

The Rawak Vihara was an ambitious and probably expensive enterprise. It contains the largest stupa complex on the

southern Silk Road, and, unlike other sites, it had many life-size and twice-life-size statues as well as some paintings. The statues and probably architectural parts of the Rawak Vihara were painted, and the entire complex was likely part of a human-scale sculptural mandala.

The iconography of the statues and the architectural context for them are difficult if not impossible to discuss, because we do not have a comprehensive view of the entire complex. It can be imagined that the stupa probably followed a mandala plan, with a Vairocana buddha (the cosmic buddha) at its center surrounded by the buddhas representing the four directions.

The beauty of the Rawak Vihara is unsurpassed elsewhere in Xinjiang, and the *visva-vajra* plan probably comes directly from Taxila in Gandhara, as does the style of rich, swirling drapery on some of the statues. The original monument with plaster, whitewash, and color must have been stunning. I do think (or would like to think) that Xuan Zang saw it.

Notes

For consistency, we use place-name spellings as they appear in the *National Geographic Atlas of the World*; e.g., Khotan is referenced in parentheses as Hotan. *Khotan* is the Turkish; *Hotan* is the old Chinese spelling and would be referred to on a PRC map as *Hetian*.—ED.

- 1 Statue numbers are R66–R74.
- 2 See Ahmad Hasan Dani, *The Historic City of Taxila* (Paris: UNESCO, 1986), 196; and Sir John Marshall, *A Guide to Taxila* (Karachi: Sani Communications, 1960), fig. 14.
- 3 The best modern book on Xuan Zang in English is Sally Hovey Wriggins, *The Silk Road Journey with Xuanzang*, rev. and updated (Boulder, CO: Westview Press, 2004).
- 4 The Chinese that Xuan Zang uses for this site is *K'iu-sa-ta-na* (*Qiusadana*, in modern Chinese). This term is a transliteration of the Khotanese name *Kustana* and is the Chinese name for the site used in the title on the Rawak map (fig. 1) below the English *Khotan*.
- 5 Gropp 1974: pls. 100, 101; now in the Metropolitan Museum, New York, accession no. 30.32.1.
- 6 *Ibid.*, pls. 100, 103; now in the Metropolitan Museum, New York, accession no. 30.32.3.

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