

# A History of the Stein and Central Asian Digitisation Project at the British Museum

Carol Michaelson

Curator, Chinese Art, The British Museum (retired)

## Introduction

The Stein Collection at the British Museum is of world-renown and unique in many aspects. When it first arrived in Bloomsbury, the British Museum and the British Library were one and the same institution. In 1973, the British Museum and British Library became separate, independent, entities. The paintings and three dimensional artefacts were classed as objects and remained at the British Museum. The manuscripts were classed as texts or documents, and became part of the British Library.<sup>1</sup> The anomaly in this division of the collection was Stein's collection of coins, which had been associated with the manuscripts, but were transferred to the British Museum's Department of Coins and Medals.<sup>2</sup>

The digitisation of the British Museum's Stein Collection, and some other Central Asia-related material (collected and donated by Rudolf Hoernle,<sup>3</sup> George Eumorfopoulos,<sup>4</sup> C.P. Skrine<sup>5</sup> and Joseph Needham<sup>6</sup>), began in 2000 and is still ongoing as this paper goes to press. It has been done in three stages, known within the British Museum as Stein One, Two and Three. Many people within the Museum and outside have been involved, and I hope that I have paid due credit to all those who have been so helpful in bringing this project to fruition.

Stein One included the major paintings and two-dimensional material. Stein Two encompassed most of the major three-dimensional material. Stein Three, which is still ongoing, includes the remainder of the three-dimensional material. Other projects included under the overall heading of the digitisation project involved the Dunhuang Textiles Project (a study of the Museum's Chinese and Central Asian textiles) and a translation project to ensure that the unique paintings should be made more accessible to a Chinese audience by having the metadata translated into Chinese.

## Background to the Stein and Central Asian Digitisation Project

A large proportion of the Chinese material in the Stein Collection at the British Museum came from Cave 17 ('the hidden library') at the Mogao Buddhist Caves, about 25km south-east of Dunhuang, in Gansu province, China. Cave 17 was a side room accessed through Cave 16. A very large quantity of manuscripts, paintings and smaller items had been placed there in the 11th century, and had remained hidden away until their chance discovery in 1900. They were remarkably well preserved owing to a unique combination of factors; essentially they had lain untouched for 900 years in a dark dry cave in the desert climate at Dunhuang.<sup>7</sup> The contents of Cave 17 are now in various museums, libraries and holdings around the world: in China, France, India, Japan, Korea, Russia, the UK and USA.<sup>8</sup>

The material from Cave 17 acquired by Stein, together with the material collected by Hoernle, Eumorfopoulos, Skrine and Needham, includes over 320 paintings, plus many more fragments of paintings and murals, and about 1600 three-dimensional objects. These include some well-known textiles, wooden architectural fittings, pottery vases and figures, shoes, horses, pastries, tools (such as weavers' combs and beaters), paper flowers, Buddhist figures in stucco and on wooden, painted panels, and votive plaques. The collection is particularly important because it encompasses both Buddhist

and secular items dating back to the first millennium AD. These are unique and of outstanding importance in the history of Chinese Buddhist and secular art of the period.

The Joseph E. Hotung Gallery is the British Museum's main gallery devoted to the Asian collections. It is on the first floor of the King Edward building on the north side of the Museum. Originally known as the King Edward VII Gallery,<sup>9</sup> it was built in the early 20th century. When it opened to the public in May 1914, the first objects displayed in this gallery were those collected by Stein on his Second Expedition to Chinese Central Asia.<sup>10</sup> Today, material from the Stein Collection is displayed on the north side of this gallery to the right side of the entrance. A selection of architectural fittings, ceramics, and other three dimensional objects, including stucco sculpture, and coins are on permanent view. However, as there are large windows on either side of the Hotung Gallery this means that especially light sensitive material, such as textiles, woodblock prints and paintings which are amongst the rarest finds from Dunhuang, cannot be displayed. It has always been a policy of the Museum whenever practical, and in accordance with the observation of strict conservation protocols to limit the amount of handling any collection item receives to what is appropriate for its long term protection, to show this material to researchers, who have made a special advance request to see it.

It was therefore the need to 'showcase' this light sensitive material for the public that prompted the Museum to consider a project to digitise the collection. The aim was that it might then be viewed internationally by scholars and the general public alike, and at a standard that would enable the viewer to see it as effectively as viewing it with a magnifying glass in person. Although much of the material had been published in works of reference over the years, not least by Stein himself,<sup>11</sup> many of these publications were out of print and expensive. The latest publication on the British Museum's Stein Collection, was Roderick Whitfield's (then a curator at the Museum),<sup>12</sup> *The Art of Central Asia. The Stein Collection in the British Museum*, in three volumes, published c. 1982–1985, but these books, the photographs of which were also the copyright of the Japanese publishers and not the British Museum, were also out of print as the print run was fairly small.<sup>13</sup> His shorter book, *Caves of the Thousand Buddhas: Chinese Art from the Silk Route*, co-authored with Anne Farrer, also a curator at the Museum,<sup>14</sup> in 1990, was more generally available.<sup>15</sup>

The Museum had to raise money to pursue a digitisation project. The experience of the British Library in achieving external funding to set up the International Dunhuang Project (IDP) had demonstrated how such a successful collaboration could work and it was decided that the British Museum should also follow this route, if possible. Anne Farrer was involved in the project when it began in 1999, but after she left the Museum in 2000 I was put in charge of managing it and set about applying for funds from the Andrew Mellon Foundation, which at that time was funding the digitisation of Dunhuang manuscripts under the auspices of the IDP at the British Library for inclusion on ArtStor. Susan Whitfield, Head of the IDP at the British Library, was extremely helpful at every stage of this project, giving

assistance and advice on how to apply for funds and with help on running the project generally.

### Stein One

Having decided internally to do the project in stages, the Museum applied to the Mellon Foundation in 2000 for funds to begin by digitising the outstanding collection of 323 paintings. We applied on the grounds that the project would provide a new resource for academics, teachers, students and travellers interested in Stein and his discoveries. It would also benefit many institutions of learning including departments of history, art history, history of religion, history of medicine, Central Asian studies, Chinese studies, archaeology and conservation. We suggested that if we received the money it would allow access to a worldwide collection of international significance which, before, had been difficult for the general public to access, especially due to the conservation and handling restrictions that need to be imposed on the collection to ensure its long-term preservation. The project would provide quality assured documentation on the collection as the Museum's database, Merlin, would be updated with new information by scholars working on the digitisation programme. Their changes would go live on the public database soon after any changes and additions were made. It was also suggested that the project could stimulate innovative approaches to accessing and using global academic resources both effectively and efficiently. It is well known that the British Museum and the British Library, as well as other institutions with holdings of Dunhuang and Central Asian material, have a great number of fragmentary woodslips (early texts written in ink on strips of wood) and painting fragments. Publishing them on line might make it possible to recognise 'virtually' those pieces that 'belonged' together and subsequently to publish them as 'reunited' entities.<sup>16</sup>

The first tranche of money was secured from the Mellon Foundation in 2001 and Stein One ran from 2001–2. I was appointed the Project Director overall, supervising the management of the project on behalf of the Museum, in addition to my other curatorial duties. The intellectual input of the project was administered by an Administrative Assistant, working on a full time basis for a year, and this post was advertised and eventually filled by Lilla Russell-Smith, a Central Asian art-historian.<sup>17</sup> Lilla worked on selecting the order in which the paintings were to be digitised, organizing their transport to the photographic studio, writing up the Merlin database entries and was generally in charge of the day-to-day running of the project. For the metadata, she followed the detailed entries for the paintings written by Roderick Whitfield in *The Art of Central Asia*, volume 1, but put them in an abbreviated form.

### *New digital photography*

The Museum's photographers trialled a number of digital scanning backs for the project and decided on a Phaseone digital back. The supplier of this camera back, DTEK Systems, then provided training, through Tony Bhalla, in digital back software. As a result of this, the Department of Asia (known then as the Department of Oriental Antiquities),<sup>18</sup> was the first department in the Museum to use

digital photography and the skills of our two photographers involved in the project, John Williams and Kevin Lovelock, were then ‘cascaded’ down to all other photographers in the Museum, which now uses digital photography for all Museum work.

#### *Involving other departments in the museum*

The stitching together and manipulation of digital images was another technique which had to be acquired by the Museum. This was skilfully done by Martin Buttery and Dolores Grau-Vilaseca of the Museum’s New Media Unit, led by Matthew Cock.

The production of so many images on CDs also provided the catalyst for addressing the question of long-term storage of so many new images within the Museum. This problem was eventually resolved by the creation of another database, the Digital Assets database, which was formed at this time specifically to store the Stein images but was later expanded to include images of all British Museum material.

Another department which was heavily involved in all stages of the digitisation project was that of the Documentation section of the British Museum, and here Tanya Szrajber, Head of Documentation, provided invaluable help. New terminology needed to be inserted into the database both for use by Mellon on their own database, as well as by the British Museum, and expanded lists of place names and other technical matters associated with the much enlarged metadata were needed for the project. Tanya, together with Peter Main, was also heavily involved in the necessary restructuring of the database to accommodate the new fields necessary for the Chinese language input and to help resolve the problems of inputting in a foreign script. Our project assistants worked very closely with Tanya<sup>19</sup> on all the data work relating to this project.

During the year of running this part of the project the Museum not only gained new camera equipment and knowledge, it also acquired various new computers and programmes with the ability to write Chinese, and money for books associated with the Stein project generally. In return, the Mellon Foundation requested that the digitised material should be available in a format on our database in a way that would allow us to extract certain fields that could then be used on their own database. It was agreed that images of the objects would be provided to Mellon for their use along with information about the object and a caption for detailed shots. These images were stitched and manipulated by our New Media Unit staff and then CDs containing the photographic images were combined with metadata in Excel form and sent in batches on a regular basis to Mellon. Mellon had agreed to fund several Stein projects around the world and intended to collate this material within one global database. At the same time, the British Museum agreed a Memorandum of Understanding (MoU) in 2001 with the British Library for collaboration with the IDP that included the IDP adding the above material to their website. (In the long run, the Mellon International Dunhuang Archive (MIDA) has been merged into ArtStor, available on subscription only, and the British Library is now the lead institution in collating the images and data on the various Stein collections around the world under the leadership of Susan Whitfield.)

#### *Conservation of Stein material*

An important issue which emerged during this first part of the digitisation project was that of conservation, an aspect which continued to be important at all stages of the project. The issue was first flagged up when we began to look at the fragments of murals and paintings. Karen Birkhölzer, then Senior Conservator, Inorganic Material Section,<sup>20</sup> in the British Museum’s Department of Conservation, Documentation and Science (now renamed as the Department of Conservation and Scientific Research), was involved in this process. It was obvious that the fragments needed to be backed and mounted before photography would be possible. It soon became apparent that our conservation studio could not cope with all the extra work this entailed, let alone the conservation of the silk paintings and fragments, without further assistance so it was suggested that a Chinese conservator from the Shanghai Museum might be invited to come and help with this process. Mrs Qiu Jinxian,<sup>21</sup> Conservator of Eastern Pictorial Art, had been at the British Museum since April 1988 and it was agreed that her former colleague at the Shanghai Museum, Mrs Zu Pingfang should come to London to work on a four-month contract to help conserve and mount the Stein fragments. It took many months to organise this visit, because of visa complications and other issues, before Mrs Zu eventually arrived in 2002. Her highly skilled work involved removing previously applied backings, subsequently considered inappropriate.<sup>22</sup> We also purchased new housing for this newly conserved material which is now stored in specially made storage cabinets and boxes. It was decided that the conservation of the mural fragments would have to wait until later in the project.

#### **Stein Two**

With the successful completion of this first part of the project, the Museum decided to apply to Mellon for a further grant to digitise the three dimensional Stein material amounting to over 1000 objects. We reckoned it might take up to three years to digitise these and in the event Mellon decided only to fund a further year. This inevitably meant that the project had to be scaled down. As the grant clearly could not cover photographing and cataloguing all the 3D material it was decided to concentrate on the major items, which were thought to include around 600 items, excluding many of the textiles. We received money from the Mellon Foundation for this further one year grant in late 2002.

#### *Project assistant and data management*

Cecilia Braghin, a Sinologist, was appointed as the project assistant for Stein Two, and worked in the British Museum from April 2003 to June 2004.<sup>23</sup> She surveyed, then selected which textiles and three-dimensional artefacts should be included in the project and moved these in batches to the photographic studio. She also worked with the Museum’s New Media Unit whose staff did the manipulation of the images and burned them onto CDs, the contents of which are now on the Museum’s Digital Assets database, linked to the Merlin database. Cecilia was responsible for the final approval and identification of the images and for composing the metadata which went with each image, including its

Chinese title.

The process followed was the same as Stein One: first, digital photographs were taken of the objects, and subsequently manipulated by our New Media Unit staff. The photographic images (TIFF) were then combined with metadata in Excel form, burned on CDs and sent to Mellon in batches on a regular basis. A sample CD was sent to Mellon at the beginning of the project to make sure the quality of the images and the data attached to them responded to their requirements. Upon agreement, the rest of the material was digitised. This amounted to approximately 100 textiles and 450 other 3D objects from the Stein collection. All these images are now on the Museum's Digital Assets database.

#### *Photography of Stein Two objects*

Digital photography was again carried out by the two British Museum photographers attached to the Department of Asia, John Williams and Kevin Lovelock.

Rather than buying a new camera for Stein Two it was found that attaching a new camera back (a Phaseone H25) to another British Museum Sinar P2 camera, sufficed. Other expenses in the photographic budget included an additional G5 MAC computer with attached monitor to enable both photographers to work simultaneously on the manipulation of the images. We also had to replace pieces of lighting equipment.

It took some time and experimenting to set up the process of photographing 3D objects, rather than flat 2D items as for the paintings. Dealing with objects of different shapes and sizes meant the photographers had to spend time on moving the objects around, arranging them on stands or mounts and setting up camera and lighting appropriate to the individual pieces. This was a more complicated process than with the paintings but was compensated for by the fact that many items were photographed in groups, rather than singly. As it was possible to photograph a considerable number of objects in groups, we digitised a greater number of objects than was achieved in Stein One. However we burned fewer CDs during Stein Two than Stein One, because textiles and three-dimensional artefacts, are, over-all, smaller in size than paintings, and therefore take less electronic space which meant that more images could be stored on one CD.

Two versions of each image were processed: a master image and a cropped image. Two versions of each CD were sent to Mellon, amounting to 118 CDs in total.

#### *Conservation of Stein Two objects*

During Stein Two, a major conservation programme was carried out on the textiles in the Stein Collection, which, except for routine conservation checking, had not been looked at for about twenty years. These needed treatment and/or mounting before photography was possible. We appointed Thordis Baldursdottir, a textile conservator, for fifteen months to work exclusively on the Stein material. Cecilia and Thordis surveyed all the Stein textiles at the British Museum and organised the conservation work in stages, so that the material could be ready in batches to suit the photographers' schedule. We also acquired new storage cabinets with wide drawers suitable for housing long banners

and streamers. The conserved textiles are now stored in ideal conditions, which combine maximum safety with easy accessibility. After finishing her work at the British Museum on Stein Two, Thordis then went to work on the Stein textiles at the V&A for nine months.

#### *Other initiatives connected to the Stein material and the Digitisation Project*

Other initiatives involving the Stein Collection in the period 2000–11, and using money from the Mellon Foundation, included the translation of much of the metadata of the major Stein paintings into Chinese in order to make the Museum's database as accessible as possible, particularly to a Chinese audience. We looked into the question of hiring a Chinese assistant to work on this translation in the Museum. However, in view of the difficulties of obtaining work permits, it was decided instead to send the material to be translated in China, engaging staff in the IDP Centre at the National Library of China in Beijing to do this translation work for us. A Chinese assistant, Zhang Wenhui, who was temporarily based at the British Library,<sup>24</sup> gave us additional help in inputting the Chinese captions into the Excel files. We retained Cecilia's services for an additional few months to manage this work and to input the new and translated material into the Merlin database. She identified which paintings should be singled out for translating into Chinese in an expanded form and liaised with the Lin Shitian at the National Library of China over the translation work.<sup>25</sup>

Each major painting is now accompanied by detailed information in Chinese and English. This includes the name of the painting, a description of the painting, its size, inscriptions on the painting, and also bibliographic references. We were able to use the full text from Roderick Whitfield's entries in *The Art of Central Asia*, which were then used as the source text for the translation into Chinese.

I should also like to acknowledge the assistance of my former colleague, Mary Ginsberg, a curator in the Department of Asia, who was extremely helpful at all stages of the Stein digitisation project. She not only contributed to the many cross-departmental meetings that were organized in relation to both Stein One and Stein Two, but provided essential continuity throughout the project, working with both Lilla and Cecilia.

#### *Digitisation of the textiles*

Another stage of the Stein digitisation project, separate from the work funded by Mellon, emerged when Carol Michaelson re-encountered Professor Zhao Feng at a Metropolitan Museum seminar in New York in 2000. Professor Zhao was then Vice-Director of the Hangzhou Silk Museum,<sup>26</sup> and Professor of Textile Technology at Donghua University, Shanghai. He is a world expert in Chinese silk and textile technology, and it became apparent that if the British Museum could arrange the necessary financing Professor Zhao was willing to come to the Museum to work on the textile fragments in the Stein Collection. Over the next year, Carol Michaelson applied for and obtained a British Academy grant which would pay for Professor Zhao's work, subsistence and airfares, and the British Museum agreed to house Professor Zhao in the Museum's visitors' flat.<sup>27</sup>

Although it is associated with Stein Two, this project was not funded by Mellon, and thus can be seen as a separate project. Details of this project are given at the end of this paper.

### Stein Three

The last stage in the process of digitising the Stein collection began in 2011 and will finish in late 2012. The Mellon fund for Stage Two had not been entirely exhausted, and it had been agreed with the Mellon Foundation that the Museum could retain the money for the future hire of a staff member to complete the documentation and digitisation of the remaining 3D material in the Stein Collection and related Central Asian material. The total number of objects in Stein Three is about 1360. The post was advertised and Catrin Kost, whose doctoral work had focused on Chinese archaeology, was hired in April 2011 to research and manage the day to day running of this project, under the general supervision of Clarissa von Spee, Curator of Chinese Paintings, who had taken over the management of the Stein Collection on Carol Michaelson's retirement from full time work at the British Museum in 2008.

This particular part of the project has again benefitted considerably by input from the IDP at the British Library. This collaboration was carried out under a renewal of the 2001 MoU between the British Museum and the British Library for adding the new material onto IDP, alongside the material previously entered from the earlier two stages. Because there were insufficient resources at the British Museum for photography during this period, the IDP provided a photographer, Rachel Roberts, to come to the British Museum to carry out the work in situ. The IDP used funding from a grant at the Research Institute of Korean Studies at Korea University to help fund Rachel (as the IDP staff are externally funded) and also sought additional individual donations to enable the work. The images are taken according to the IDP's high standards, also using a Phase One digital back on a medium format camera, and with at least one recto and one verso shot per object. If required, angle shots are also taken, so that sometimes there may be five or more images per object. These are then uploaded into the British Museum's Digital Assets database. This thorough photographic documentation should ensure that these fragile objects should need to be handled much less frequently in the future as they will be recorded so clearly on the database. The images, along with metadata updated by Catrin Kost and additional metadata prepared by the IDP, are also available on the IDP website. As part of this project, and with funds from the World Collections Programme, Hu Wanglin (of the Xinjiang Institute of Archaeology), and Mandira Sharma (of the National Museum Institute, New Delhi), who have been based at the British Library, have also helped with this work at the British Museum.<sup>28</sup>

#### *Conservation issues relating to Stein Three*

Catrin has spent much time collaborating with colleagues in the Department of Conservation and with Museum Assistants in the Department of Asia in order to ensure the best possible storage conditions for the objects. The majority are now stored in drawers with many of the individual objects set inside foam cushions customised (cut-out) for each

item to prevent object movement during the opening and closing of the drawers. The precise metric measurements of each object have also been checked, and noted on the Merlin database. The conservation and stabilization of the wall painting fragments (mentioned above in Stein One), as well as various groups of material, were undertaken at this stage of the project.

#### *Completion of the Stein and Central Asian Digitisation Project*

By the end of 2012 we will have successfully completed the digitisation of the majority of the items in this world-renowned collection of Central Asian material thanks to the generosity of the Mellon Foundation, the British Academy, the dedicated staff at the British Museum and specialist visitors, and the continued assistance and practical support of the International Dunhuang Project at the British Library.<sup>29</sup> We are delighted that the collection will be easily accessible to the world in pictures and in English text, and, importantly, with the metadata of a wide range of this material having been translated into Chinese for those readers more comfortable in that language.

### The Dunhuang Textiles Project

As mentioned above, this project was funded separately from the Stein and Central Asian Digitisation Project. The recipient of a British Academy grant, Zhao Feng arrived in the UK on 18 April 2006. He had intended to leave around the middle of August, however, on arrival, and having ascertained that there would be more work to do on the textiles than he had envisaged, he arranged to stay an extra month and left the UK on 19 September. During these months, Professor Zhao arranged for two of his PhD students, Ms Wang Le and Xu Zheng, to join him in London and work with him on this project. The combined efforts and expertise of this team immeasurably increased the number of textiles that were able to be digitised.

#### *Summary of the work carried out*

Zhao Feng, Wang Le and Xu Zheng analyzed and studied approximately 250 complete textiles and approximately 400 fragments in the Stein and Central Asian Collections at the British Museum. The textiles date from the Han dynasty (206 BC–AD 220) to the end of the Tang dynasty (AD 618–906). The team wrote detailed descriptive and technical information about all the complete textiles, in both English and Chinese. Where it was possible to reconstruct their original pattern or original shape, this was done, using a computer programme, and recorded on the British Museum's Digital Assets database. The team also took microphotographs of the textiles (it is possible to see and count the weft and warp threads), where the original photography, which pre-dated the Stein digitisation project, was thought to be inadequate or not available, and these were also put onto the Museum's Digital Assets database. They used their own photographic equipment to do this digital photography; the Museum's photographers were not involved in this particular part of the project.

Whilst in London, they also studied the Dunhuang textiles in the Stein Collection at the V&A Museum (around 200 pieces), and the many textiles which were used to wrap or tie

manuscripts in the Stein Collection at the British Library.

Another generous donor to the Museum, Tim Simon, who has an interest in the Silk Road, kindly provided additional financing for this project via the Pidem Trust, of which he is a trustee. This additional money enabled Zhao Feng to spend a short period of time in Central Asia and Russia studying Central Asian textile materials there. These materials included textiles (around 56 pieces) in the Oldenberg Collection<sup>30</sup> at the State Hermitage Museum, St. Petersburg.

#### *New information on textile technology*

The team's detailed examination of the textiles from Dunhuang revealed some important technological information. Different types of textiles with different weave structures were identified, including warp-faced compound tabby (plain weave) and twill, weft compound twill, damask on tabby (plain weave) and twill damask, simple and complex gauze, different types of brocades, embroidered textiles in chain-, split-, satin- and couch-stitches, and clamp resist-dyed silk tabby (plain weave). Most of these textiles can be compared with other textiles excavated from along the Silk Road. The detailed and systematic investigation of the BM's Dunhuang textiles therefore provides us with sound data for comparison. It also provides new information about the history of the interaction of Chinese and Western Asiatic methods and the spread of textile technology in Central Asia from the first century to the 9th century.

#### *New light thrown on art history*

The detailed study of the textiles and the reconstruction of the textile patterns can also be used as comparative material for other works of art found along the Silk Road; for instance, the murals, the metal work and pottery figures. The Dunhuang textiles thus help to flesh out some of the missing artistic heritage of the Silk Road by showing common decorative patterns that had only been partially preserved in other media. Some new patterns were identified that had not been seen before. This offers great potential for future research in art history. The findings are now available in Chinese and English on the British Museum's Digital Assets and Merlin databases, and on Collections Online (the online version of Merlin, accessible on the British Museum website).

#### *Publications relating to the Dunhuang Textiles Project*

Prior to Professor Zhao's arrival at the British Museum in April 2006, Helen Persson had completed her work on the Stein textiles at the V&A (following conservation work by Thordis Baldursdottir, textile analysis and cataloguing by Helen Persson and Sonia Solicari, and photography of all the pieces). The question of a joint publication covering the Dunhuang textiles in the Stein collections in the British Museum, V&A and British Library was raised independently by Zhao Feng, Helen Wang (British Museum), Helen Persson (V&A) and Frances Wood (British Library). Zhao Feng offered to arrange publication by the Donghua University Press, Shanghai, and a year later the book *Textiles from Dunhuang in UK Collections* was in print. Two separate editions were produced: one in Chinese and one in English.<sup>31</sup> The Chinese edition was launched at the 'Silk Road Art and Life'

conference, in Hangzhou in April 2007. The English edition was launched at the 'A Hundred Years of Dunhuang, 1907–2007' conference in London in June 2007.

Donghua University's project 'A Comprehensive Study of Dunhuang Textiles', was one of the key publication projects of China's Eleventh Five Year Plan.

The catalogue of the Dunhuang textiles in France has already appeared, with separate Chinese and French volumes, and an English edition is imminent.<sup>32</sup> These are the textiles collected by Paul Pelliot, and housed in the Bibliothèque nationale de France and the Musée Guimet, Paris. Catalogues of the Dunhuang textiles in Russia, India and China are also planned.

#### **Website information**

The British Museum's website [www.britishmuseum.org.uk](http://www.britishmuseum.org.uk) has links to the IDP's multilingual websites, where the British Museum's holdings are viewable alongside other collections relating to Stein and Central Asia. Together these websites provide an illuminating insight into Silk Road life during the first millennium AD, for scholars and general readers alike.<sup>33</sup>

#### **Notes**

- 1 For details of the history of the collection, H. Wang, H. Persson and F. Wood, 'Dunhuang Textiles in London', in Zhao Feng et al. (eds), *Textiles from Dunhuang in UK Collections*, Donghua University Press, Shanghai, pp. 12–21 (and in this volume); also H. Wang and J. Perkins (eds), *Handbook to the Collections of Sir Aurel Stein in the UK*, British Museum Research Publication 129, London, 2008, [http://www.britishmuseum.org/research/research\\_publications/online\\_research\\_publications/handbook\\_stein\\_collection.aspx](http://www.britishmuseum.org/research/research_publications/online_research_publications/handbook_stein_collection.aspx) (accessed Jan 2012).
- 2 For the history of the coins collected by Stein, see Chapter 3 of H. Wang, *Money on the Silk Road. The Evidence from Eastern Central Asia to c. AD 800*, British Museum Press, London, 2004, especially Chapter 3.
- 3 Rudolph Hoernle (1841–1918), Orientalist, See Ursula Sims-Williams' article in this volume.
- 4 George Eumorfopoulos (1863–1939), collector. See R. L. Hobson, *The George Eumorfopoulos Collection, 11 vols*, Ernest Benn, London, 1925–32.
- 5 Sir Clarmont Percival Skrine (1888–1974), British consul in Kashgar, 1922–24. See D.C. Waugh and U. Sims-Williams, 'The Old Curiosity Shop in Khotan', *The Silk Road 8* (2010), pp. 69–96, accessible on <http://www.silkroadfoundation.org/newsletter/vol8/> (accessed Jan 2012); and D.C. Waugh, 'The Mysterious and Terrible Karatash Gorges: Notes and Documents on the Explorations of Stein and Skrine', *The Geographical Journal* vol. 163 no. 3 (Nov 1999), pp. 306–20.
- 6 Joseph Needham (1900–1995), renowned for his multi-volume series *Science and Civilization in China*, 1954 onwards.
- 7 See F. Wood and M. Barnard, *The Diamond Sutra: the story of the world's earliest dated printed book*, British Library, London, 2010.
- 8 See the IDP website <http://idp.bl.uk/>.
- 9 This gallery was refurbished and renamed in 1992 to reflect the generous donation of Sir Joseph E. Hotung.
- 10 See *Guide to an Exhibition of Paintings, Manuscripts, and Other Archaeological Objects, collected by Sir Aurel Stein, K.C.I.E., in Chinese Turkestan*, British Museum, 1914 (57 pp.). The Introduction to this Guide is reproduced in H. Wang, *Sir Aurel Stein in The Times*, Saffron Books, London, 2002, pp. 143–5; along with The Times coverage of this exhibition (2, 5, 7, 8 May 1914), pp. 62–8.
- 11 See H. Wang, 'Sir Aurel Stein – Bibliography', in H. Wang and J. Perkins (eds), *Handbook to the Collections of Sir Aurel Stein in the UK*, *op. cit.*, pp. 50–9.
- 12 Roderick Whitfield was a curator at the British Museum from 1968 to 1984, when he became the Percival David Professor of Chinese and East Asian Art, School of Oriental & African Studies, London. See D.M. Wilson, *The British Museum. A History*, British Museum Press, London, 2002, p. 393.

- 13 R. Whitfield, *The Art of Central Asia. The Stein Collection in the British Museum*, 3 vols, Kodansha International in co-operation with the Trustees of the British Museum, New York, c.1982–5.
- 14 Anne Farrer was a curator at the British Museum from 1984–2000; see D.M. Wilson, *The British Museum. A History*, *op. cit.*, p. 385.
- 15 Roderick Whitfield and Anne Farrer, *Caves of the Thousand Buddhas: Chinese Art from the Silk Route*, British Museum Press, London, 1990.
- 16 Wang Tao (School of Oriental and African Studies, University of London) and Frances Wood (British Library) organised a workshop in London in 2004 to do precisely this, with grants received from the Sino-British Fellowship Trust, and the Chiang Ching-Kuo Foundation for International Scholarly Exchanges, and published the results in Wang Tao, Frances Wood and Hu Pingsheng (eds), *Unpublished Chinese Wooden Slips in the British Library*, Shanghai cishu chubanshe, Shanghai, 2007.
- 17 Lilla is now the Curator for Central Asian Art, at the Museum für Asiatische Kunst, Berlin.
- 18 The Department was renamed in 2003.
- 19 Tanya's single minded pursuit of excellence and unflinching loyalty to Merlin has earned her the affectionate nickname as 'the Rottweiler' of data standards at the Museum.
- 20 She is now Conservator: Stone, Wall Paintings and Mosaics.
- 21 Mrs Qiu retired from full time work in August 2011. She is known to her Chinese-speaking colleagues, of all ages, as Xiao Qiu ('Young/Little Qiu').
- 22 The method was devised by Stanley Littlejohn (1877–1917), conservator at the British Museum. See Laurence Binyon and Sidney Colvin, 'The Late Stanley William Littlejohn', *Burlington Magazine*, vol.32, 1918, pp.16–19, summarised on National Portrait Gallery website <http://www.npg.org.uk/research/programmes/directory-of-british-picture-restorers/british-picture-restorers-1630-1950-1.php>. For a history of the collection, see the paper by Wang, Persson and Wood in this volume.
- 23 After this formal period of employment was over, Cecilia continued to help with entries on the Merlin database.
- 24 Ms Zhang Wenhui, as subject librarian at the Institute of Archaeology, Chinese Academy of Social Sciences, Beijing, was an intern working on the IDP from March 2003 for one year, funded with a Chinese government grant.
- 25 Saren Gaowa translated from the Japanese version; Li Defan (edited the Chinese), and Lin Shifan then checked the Chinese text against the English version.
- 26 He is now the Director, and the Hangzhou Silk Museum is now known as the China National Silk Museum.
- 27 This building was demolished in 2011 to make room for the British Museum's new World Conservation and Exhibitions Centre (WCEC).
- 28 As part of the World Collections Programme, the International Dunhuang Project Internship Programme offered a series of internships at the IDP to provide training in digitisation for young professionals in China and India. See [http://www.britishmuseum.org/about\\_us/skills-sharing/world\\_collections\\_programme/international\\_dunhuang\\_project.aspx](http://www.britishmuseum.org/about_us/skills-sharing/world_collections_programme/international_dunhuang_project.aspx) (accessed Jan 2012).
- 29 The two last remaining groups of objects collected by Stein that still await digitisation are the potsherds (in the Department of the Middle East), and the coins (in the Department of Coins and Medals).
- 30 Sergei Fedorovich Oldenburg (1863–1934) led two expeditions to Central Asia. For details, see the IDP website [http://idp.bl.uk/pages/collections\\_ru.a4d](http://idp.bl.uk/pages/collections_ru.a4d).
- 31 Zhao Feng et al., *Textiles from Dunhuang in UK Collections*, Donghua University Press, Shanghai, 2007.
- 32 Zhao Feng et al., *Textiles de Dunhuang dans les collections françaises*, Donghua University Press, Shanghai, 2010.
- 33 I should like to thank Helen Wang for her invaluable help at every stage of the writing of this paper.