

Rudolf Hoernle and Sir Aurel Stein

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Much has been written about the Central Asian explorer and archaeologist Sir Aurel Stein, but his early collaborator Rudolf Hoernle is comparatively less well-known despite his key role in deciphering newly discovered Central Asian languages and managing the cataloguing and editing of all Stein's Brahmi script material until his death in 1918. In this paper I shall attempt to expand on the somewhat complex relationship between them, summarising Hoernle's work and drawing on some relatively unknown sources.¹

Augustus Frederic Rudolf Hoernle² was born on 14 November 1841 in Secundra, India, the second of nine surviving children of the Reverend Christian Theophilus Hoernle. He came from a long line of missionaries which included both linguists and revolutionaries: his father translated the gospels into Kurdish and Urdu; his uncle Theodor Mögling had been a leading force in the 1848 Baden revolution in Germany. In the next generation, his son, Alfred (1880–1943), became a distinguished philosopher, while his nephew Edwin (1883–1952) had a successful political career in the German Democratic Republic as Minister for Agriculture and Forestry. At the age of seven Hoernle was sent home to his grandparents in Germany for his education. After completing theological studies in Schönthal and the University of Basle, he went to theological college in London in 1860, and, from 1864 to 1865, he studied Sanskrit at University College London with Theodor Goldstücker.³

Hoernle was ordained in 1864 and returned to India in 1865, where he was posted by the Church Missionary Society to Mirat. In 1869, he was transferred, at his own request, from active missionary service to work as Professor of Sanskrit and Philosophy at Jay Narayan College, Benares. It was there that he several times met and talked to Dayananda Sarasvati,⁴ founder of the Arya Samaj movement, and his first publication was a report of Dayananda's public disputation in Benares in 1869.⁵ From 1878 to 1881, Hoernle was Principal of the Cathedral Mission College, Calcutta, and, in 1881, he joined the Indian Educational Service as Principal of the Calcutta Madrasah. During these years he was engaged by the Government to inspect coins and archaeological finds in general, and was latterly put on Special Duty to report on the finds from Central Asia which subsequently became known as the British Collection of Central Asian Antiquities. In 1899 he retired to England at the age of 58 and settled in Oxford where he lived until his death after a short attack of influenza on 12 November 1918.

The formation of the British Collection of Central Asian Manuscripts, 1895–1900

Having been in India for several decades already, Hoernle had witnessed the growth of interest in Central Asia. The search for written antiquities began with the discovery of the so-called 'Bower' manuscript,⁶ a 5th-century medical birch-bark manuscript in Sanskrit, found by treasure-seekers in 1889, in a stupa at Ming-oi, near Kucha. Its discovery was first announced to the scholarly world in 1891⁷ and it was quickly recognised as by far the oldest Indian written book that was known to exist.⁸ As a result the Russian Archaeological Society, in November 1891, sent a request to the Russian Consul General in Kashgar, N.F. Petrovsky,⁹ to try to collect similar manuscript treasures. Encouraged by the

success of the Russians, in 1893 the Government of India, at Hoernle's suggestion, instructed its Political Agents in different parts of Central Asia to make enquiries and obtain whatever examples they could.¹⁰

Between 1859 and 1900, 23 consignments of antiquities were forwarded to Hoernle in Calcutta¹¹ by the British representatives in Kashgar and Kashmir: George Macartney,¹² Stuart Godfrey¹³ and Adelbert Talbot.¹⁴ The resulting 'British Collection' included manuscripts in Sanskrit (seven substantial Buddhist manuscripts), Khotanese (parts of six Buddhist manuscripts and 69 documents, Tocharian (17 leaves of a Tocharian medical manuscript), Uigur (24 documents), Persian (four documents) and Chinese (12 documents), in addition to what proved to be forged manuscripts and blockprints (45) in unrecognisable scripts.¹⁵ It also included some 530 coins, 77 seals, terracottas and pottery. However, while the collection continued to grow, the circumstances of its acquisition by treasure-seekers remained obscure with very little information forthcoming on the exact location of archaeological sites.

Hoernle's earliest publications in 1891, on the Bower manuscript, and in 1893, on a collection of manuscripts which he had received from the Rev. F. Weber, Moravian missionary in Leh in Ladakh,¹⁶ were limited to descriptions with photographs and preliminary transcriptions. The Weber collection included besides Sanskrit manuscripts, a manuscript in a previously unknown language (Tocharian). Hoernle could not identify the language, thinking at first it might be Mongolian, and later Turki in Brahmi script, but he was able to recognise the numerous Sanskrit medical terms it contained. In 1897 he provided transcriptions of manuscripts in another unknown language, which was later identified as Khotanese. This he also thought might be Turki, but he noticed however that several documents began with the Iranian word *sali* 'year,' and suggested that it might be a date.¹⁷ Parallel to his work on unknown languages in known scripts, Hoernle devoted an immense amount of time trying to decipher material in unknown scripts. Although these were eventually proved to be forgeries, in 1899 Hoernle believed that the manuscripts, at least, were genuine and that while some of the blockprints might be modern, it was only in so far as they were copied from authentic originals.¹⁸

Stein and Hoernle 1887–1901

It was in October 1886, the year before Stein went to India, that, according to a letter to his brother Ernst, he first met Dr and Mrs Hoernle in Vienna at the 7th International Congress of Orientalists.¹⁹ Stein read a paper on the Hindu Kush and the Pamir in early Iranian geography, while Hoernle exhibited and spoke on a mathematical birch-bark manuscript discovered at Bakhshali near Peshawar.²⁰ By 1890 Stein was working on an edition of the 12th-century chronicle of the kings of Kashmir, the *Rājatarāṅginī* by Kalhaṇa, and was in touch with Hoernle about the possibility of publication.²¹ He commented on Hoernle's work on the Bower manuscript²² and must have remained in contact with him during the next few years though his letters from this period have not survived.

While on a visit to Europe in 1897, Stein heard from his old teacher Georg Bühler²³ of the discovery in a cave near

Khotan by Dutreuil de Rhins²⁴ of the Kharoṣṭhī *Dhammapada*, a birch-bark manuscript dating from the 1st century AD. Émile Senart's²⁵ paper on it at the 11th International Congress of Orientalists in Paris caused much discussion,²⁶ after which the Russian scholar Sergei Oldenburg²⁷ circulated a further fragment apparently from the same manuscript which had arrived at St. Petersburg through Petrovsky. The importance of this discovery, together with the recent acquisitions from Khotan, were, as Stein subsequently wrote, what determined him on his own expedition to Khotan. While in Europe Stein also discussed his idea with other scholars: G.Bühler, Prof. Armin Vámbéry²⁸ of Budapest, and Prof. L. Schroeder²⁹ of Vienna.

In May 1898, while in Kashmir, Stein consulted Captain S.H. Godfrey, Assistant Resident in Kashmir, on possible routes, transport arrangements, and expenses, &c. A few weeks later on 25th June he wrote asking for help and advice to Hoernle, who had been placed on special duty for reporting on Central Asian Antiquities. Hoernle was overjoyed at the idea. Ever since the first discoveries he had been trying to get accurate information about the find places and circumstances in which the manuscripts and artefacts had been found. All reports were unreliable second or third-hand accounts from treasure-seekers. 'I wish I could join you in the project,' he replied, but 'I fear I am now too old to meet the fatigues of such a journey'.³⁰ Hoernle recommended that Stein prepare a draft proposal and suggested the subsidies he should ask for from the Governments of Punjab and India. Stein replied on 17 July, enclosing a draft³¹ and then heard from Hoernle one month later:³²

I have seen the Lt. Gov. of the Punjab. I showed and explained to him the antiquities from Khotan, and how desirable it was to explore the place by a European expert. I also told him that I supported that you should be deputed. He seemed to me very well disposed towards our project, and told me to make an application.

Stein submitted his proposal to the Lieutenant-Governor of the Punjab, Sir Mackworth Young,³³ requesting leave, and, on receiving a favourable reply,³⁴ he sent in a revised version for onward transmission to the Government of India on September 10th.³⁵

At this point Hoernle intervened and wrote directly to T.W. Holderness,³⁶ Secretary to the Government of India, Revenue & Agriculture Dept., strongly backing Stein's application. Hoernle wrote of the close literary and artistic links between Khotan and India. He also mentioned his work on the bilingual Sino-Kharoṣṭhī coins issued by the Chinese administration of Khotan dating from the 1st century AD. An expedition, he felt, was needed to corroborate this and to fill in details. 'In the second place,' he wrote, 'there are a number of objects, mostly block-prints, the bonafides of which is not above suspicion. The truth of this matter can only be satisfactorily cleared up by an European explorer on the spot.' Most importantly, he concluded, Chinese Turkestan had become the focus of exploration, particularly by the Russians. A Russian commission was going to Turfan and Sven Hedin³⁷ was contemplating a second visit to Khotan. Since Khotan belonged to the British 'sphere of influence'

the Government of India should send an expedition there and get the credit for it.³⁸

Whether it was due to Hoernle's influence or not, the application was approved far sooner than either Stein or Hoernle had anticipated. Hoernle received a favourable reply from Holderness on 30 December³⁹ Stein received official confirmation later in January.⁴⁰

Throughout this period Stein and Hoernle were in constant communication. Hoernle had arranged for Stein to succeed him as Principal of the Calcutta Madrasah and there were many details to arrange, but he also helped Stein with contacts in the Survey Department, introductions to technical advisors in Calcutta, and offered to get extra subsidies from other societies – offers which Stein discouraged because he was reluctant to let his plans be generally known until they were well advanced! Hoernle also advised the Government of India, in response to an informal request, on the disposal of the finds of the projected expedition. He strongly recommended, and here he was in complete agreement with Stein, that the antiquities should be forwarded to him for examination as they were at present, to be ultimately deposited in the British Museum. Hoernle, however, went too far in his anxiety to be the first to examine the finds, writing 'I beg to submit that as I am the "intellectual father" of the project of the Khotanese expedition, I have a fair claim to be entrusted with the honour of first examining and reporting on its archaeological proceeds'.⁴¹ By claiming to be the expedition's 'intellectual father', Hoernle caused a temporary rift with Stein who objected strongly,⁴² although Hoernle excused himself explaining that the idea of an expedition to Khotan

...had been present in my mind, before I had any communication from you at all. So, when I heard from you that you were contemplating the same idea, I was delighted, because it was just what I wanted to enable me to put my plan into execution. I could not go myself, and till I heard from you, I did not know, who could undertake it, except Mr. Macartney himself; but there were difficulties in his case.⁴³

Hoernle's letters to Stein reveal an eager enthusiasm, especially in descriptions of his latest ideas. Stein spent Christmas with the Hoernles in Simla and had the opportunity to examine Hoernle's material firsthand. It was then that he rashly identified some forged manuscripts as containing Pahlavi words, as Hoernle recounted several months later after he had returned to England:

I have been working at the Khotan manuscripts (not blockprints). Those two mss which you recognised as Pahlavi, I have submitted to Dr. E.W. West,⁴⁴ who is now examining them. He is disposed to agree with you. On July 18th (before having seen the mss) he wrote to me: "Dr. Aurel Stein's opinion I think you may rely upon, so far as it goes." On July 31st he wrote: "I have paid most attention to those mss already [i.e. by yourself] supposed to contain Pahlavi words [I had sent him the other mss also] in which no doubt several letters can be identified with the Sasanian Pahlavi characters on coins and gems...or half the Sassanian alphabet, and others less certain. ..." To me it appears that this result is quite sufficient to prove that the script, and probably the language is Sassanian Pahlavi; though of course it is quite insufficient to identify the nature of the work or book. Don't you think so? What is your opinion? Dr. West has still got

the two mss, and is continuing his examination and reading. By the way, if I remember rightly shāh was one of the words you identified; this adds one to Dr. West's list.⁴⁵

Unfortunately Stein's reply has not been preserved but he was usually very reluctant to express his opinions on such matters, continually urging caution.

Several recently discovered letters from Hoernle's private papers describe Stein's progress in Khotan during his First Expedition to Central Asia, in particular his exposure of the forged manuscripts and blockprints.⁴⁶ Stein first wrote to Hoernle from Yarkand on 22 and 24 September 1900. His letters do not survive, but according to Hoernle's register of Central Asian Correspondence,⁴⁷ they described a 'well-preserved stūpa in Kashgar.' After leaving Yarkand, Stein stopped on the way to Khotan at Guma, on 5 October, with a view to investigating the sites at which Islam Akhun and others had found the numerous manuscripts and blockprints that Hoernle had described in his articles of 1897 and 1899. Stein wrote again from Khotan on 12 November – another letter which does not survive – presumably reporting to Hoernle his lack of success. Hoernle, however, did not receive this letter until early in 1901, by which time he had already sent to press the second part of his Report, which included a section on the manuscripts in unidentified scripts.⁴⁸ Hoernle's reply of 25 February is unfortunately lost.

Stein wrote again from Dandan Uiliq on 3 January 1901 (letter missing) and on 11 March from Camp Bilangan, Keriya Darya. Here he went into some detail about his discoveries at Niya, in temperatures as low as -12°F, of 'hundreds of wooden tablets, together with the parchment documents, that turned up from among the ruined houses'. Beyond Endere River, he discovered an ancient fort:

On excavating this I made a number of interesting MS. finds. Among these are several well-preserved Tibetan texts and a Buddhist Sanskrit MS. in Brāhmī char. of about the 3rd or 4th century and nearly complete. In addition documents in the non-Indian language, written with cursive "Central-Asian" characters and represented already in the Dandan Uiliq collection, have turned up there, as well as Chinese papers and sgraffitti. The sculptural work shows close resemblance to that discovered at D.U. and the fact that only paper MSS. were found is another point in common. After what I wrote to you in my last letter, you will not be surprised to hear that I failed to discover the slightest trace of any books or MSS "in unknown characters." Brāhmī, Kharoshthī, "Central Asian Brāhmī" texts on parchment, wood and paper have come to light in greater number than I could reasonably hope for. Tibetan and Chinese records also duly present themselves. Only the "unknown scripts" with which Kashgar and Ladakh were so liberally supplied for some years, seem now to have vanished. When returning to Khotan I shall endeavour to find out what has become of them, – and those who manufactured them.⁴⁹

Hoernle's anxious reply of 15 May, the day after he received Stein's letter (as recorded in his Central Asian Register), is unfortunately lost.

Stein's final letter to Hoernle from his First Expedition was written at Kashgar on 25 May 1901. Thanking him for his letters of 19 December, 25 February and 27 March, which he had only just received, he wrote about his plans for the future, and his discovery of a large *vihāra*, reliefs, and

sculptures at Rawak, before recounting his eventual interview with Islam Akhun in Khotan on 25 April.⁵⁰

I cannot enter in detail into your remarks about the forged MSS. and prints with which Islam Akhun's factory supplied Kashgar, Ladakh and Kashmir since 1895. It would be too great a task to enumerate all the evidence which has accumulated as to these forgeries. I have the fullest data to show that whatever you and others got in the way of mss. etc from Khotan since 1895 came either through Turdi, an honest old fellow who "exploited" Dandan Uiliq, or through Islam Akhun. Turdi's finds, mostly scraps in Brahmi and Chinese, are genuine; whatever Islam Akhun supplied, is manufactured. The sites which he mentioned to Macartney and others as his findplaces, are either fictive localities or mere "Tatis," i.e. completely eroded sites of villages where the loess is covered by potsherds and similar hard débris but where the survival of paper is a physical impossibility.

Practically everybody in Khotan knew of the manufacture carried on by Islam Akhun & Co., but as the Sahibs appreciated the products it was neither Badruddin Khan's nor anybody else's business to represent the facts. Islam Akhun who had suffered for forging on two occasions documents pretending to have been written by Capt. Deasy⁵¹ and Macartney, kept out of my way in the autumn. But after my return I managed with the Amban's help to get hold of him. His examination proved a most useful and amusing affair. I shall be able to tell you soon details from his depositories. He made at last a clear breast of it, acknowledged (what everybody else among his friends knew) that he had never been beyond Aksipil, and told in detail how he commenced first to write and then to print his "old books". I have, of course, kept a full record of his statements as to his associates, the process and place of manufacture, etc. and obtained in natura such pièces corroboratives as have survived after the breaking up of the establishment. It had tried its hands also in making carved objects in wood and pottery "Büts". Macartney got and kept a most funny product of the latter class.

Islam Akhun is a very clever rascal, with a good deal of humour and brains quite above the level of his compatriots. His memory as to the articles he supplied was surprising. When he was once on the road to a full confession, it was easy to see how well his avowals agreed with the stories he had told M. and which your Report reproduces. I appreciate brains even in a scoundrel, and I wonder whether I.A. is not too dangerous a fellow to let loose on an innocent Khotan.⁵²

Hoernle replied on June 27th to Stein, care of H.S. King & Co, Pall Mall. It was possibly this letter that Stein referred to when he wrote to his brother Ernst on July 4th that Hoernle had accepted the undeniable and wanted to have his Report destroyed.⁵³ Several days later Stein wrote again to his brother from Hoernle's garden that Hoernle was understandably very disappointed but had got over it.⁵⁴ Hoernle had by now received the proofs of the second part of his Report and gave them to Stein on July 17th, together with a revised manuscript introduction. Stein's reply of July 22nd shows his desire for caution:

As my own report is not yet written and as in my preliminary account it will scarcely be possible to deal in detail with what I may well call the negative results of my tour, it is doubly necessary that the statements as to forged and genuine pieces of the "British Collection" as far as they are made on my authority, should be precise and carefully considered. I am anxious mainly that nothing should be stated that I might subsequently on giving my own detailed account be obliged to modify or criticize.⁵⁵

Stein and Hoernle 1901–18

The original Central Asian Collection was, by previous agreement, purchased by the British Museum for £125 and transferred there on 17 June 1902,⁵⁶ with a few items which the Museum did not require being presented to the University of Oxford, in the name of the Government of India.⁵⁷ From the end of the year, the Government of India again started to send consignments to Hoernle to report on. Between 1902 and 1918, 12 further collections were sent. These consignments, known collectively as the Hoernle Collection, were transferred to the India Office Library in 1918 and now form part of the British Library collections. They include over 4000 Sanskrit, 1298 Tocharian and 200 Khotanese manuscripts (many fragmentary). Additionally Hoernle was sent the manuscripts in Brahmi script from Stein's first and second expeditions, which he was responsible for cataloguing and dividing between the British Museum and the Government of India (as represented by the India Office Library, London, and the National Museum, Delhi).⁵⁸

From 1903, the volume of material increased to the extent that Hoernle could no longer edit it all himself. As early as 1905, he arranged to bring out a series of volumes of facsimiles and transcriptions to be published by the Clarendon Press, the first of which, *Manuscript remains*,⁵⁹ was not published until 1916. To achieve this, Hoernle relied on a team of scholars who included F.W. Thomas,⁶⁰ L.D. Barnett,⁶¹ H. Lüders,⁶² S. Konow,⁶³ E. Leumann,⁶⁴ K. Watanabe,⁶⁵ and S. Lévi.⁶⁶ Hoernle did an initial sorting and listing of the fragments himself and then sent them to his collaborators for further study.

Hoernle's later correspondence with Stein, preserved in the Bodleian Library Oxford (1903–5) and the Library of the Hungarian Academy of Sciences in Budapest (1909–13), was largely concerned with the cataloguing and division between the British Museum and the India Office of the first and second expedition Brahmi manuscripts. Nevertheless Hoernle kept Stein up to date on his own research, particularly his progress with the decipherment of Khotanese, besides including domestic details such as his son's holiday in the Isle of Skye or his daily reading aloud of Stein's newly published *Ruins of Desert Cathay* to his wife for an hour or two after tea 'while she does some domestic work'.⁶⁷

Stein's debt to Hoernle

There is no doubt that Stein would eventually have got permission for his first expedition to Khotan in 1900, however Hoernle certainly made it much easier and quicker for him. As Stein wrote to his brother Ernst, when he wrote of his plan in February 1899, it was through Hoernle's intercession in Simla that the 'high-ups of the Indian Mt. Olympus', as he referred to them, first became interested in the project.⁶⁸

The Government of India's approval of the finds being taken to England, was also probably due to Hoernle's intervention. Hoernle had become the official examiner of Central Asian antiquities and moreover was given permission to continue his work on the 'British Collection' after retirement in 1899 and report on it from England before transferring it to the British Museum.⁶⁹ The procedure once established, it was intended, Stein wrote, 'to deposit the

archaeological proceeds which my tour may furnish, in the British Museum, after arranging with Dr. Hoernle and, if necessary, with other experts for their detailed examination'.⁷⁰ The eventual disposal of the finds from Stein's subsequent expeditions was the cause of much dispute, but the precedent of the material coming first to England and being assigned to different scholars for evaluation was by then firmly established.

At a personal level Stein probably found Hoernle extremely irritating and frequently tried to dampen his enthusiasm, nevertheless Stein valued his friendship and scholarship, regarding him as an indispensable collaborator. As he wrote to George Grierson⁷¹ concerning the decipherment of Khotanese:

You may have seen from the last number of the R.A.S.J. that Hoernle had the satisfaction of identifying complete versions of two known Sutra texts which will clear the way for a systematic decipherment. ... With the key supplied by Hoernle's discovery, the task will not be so puzzling.⁷²

On hearing of Hoernle's death in 1918 Stein wrote to Barnett:

The news of poor Hoernle's death, reported by Reuter, has, as you need scarcely be told, touched me deeply. He had always been a most devoted and painstaking collaborator, and I had owed him much gratitude for his kind help even before I first started for Turkestan. How great his services to Indology were in different and extensive fields you know best. He will be very hard to replace with his indefatigable zeal and thoroughness. It is sad to think how much pain the last four years must have brought him. But at least he lived through it to see the hope of better times. He had richly earned final rest and peace.⁷³

Notes

All quotes from the Sir Aurel Stein Collection housed in the Bodleian Library are reproduced with the kind permission of the British Academy.

- 1 This paper is based on a presentation given at 'A Hundred Years of Dunhuang, 1907–2007', 17–19 May 2007, organised jointly by the British Academy with the British Museum and British Library.
- 2 See U. Sims-Williams, 'Augustus Frederic Rudolf Hoernle', *Encyclopaedia Iranica* 12, New York, 2004, pp. 418–20.
- 3 Theodor H. Goldstücker, (1821–72), Indologist and Professor of Sanskrit at University College, London from 1852.
- 4 Dayananda Sarasvati (1824–83), Hindu religious scholar, reformer.
- 5 A.F.R. Hoernle, 'A Hindoo reformer', *The Christian intelligencer*, Calcutta (March 1870) p. 79; a report of Dayananda Sarasvati's public disputation in Benares in 1869.
- 6 Named after Lieutenant, later Major General Sir Hamilton Bower (1858–1940), who purchased it early in 1890. It is now in the Bodleian [MS. Sansk.c.17].
- 7 J. Waterhouse, 'Birch bark MS. from Kashgaria', *Proceedings of the Asiatic Society of Bengal* (November 1890 [1891]), pp. 221–3, with plate.
- 8 Hoernle, 'Remarks on birch bark ms', *Proceedings of the Asiatic Society of Bengal* (April 1891 [1892]), p. 64.
- 9 Nikolai Fedorovich Petrovskii (1837–1908), Russian Consul in Kashgar from 1882 until 1903.
- 10 Hoernle, 'A report on the British Collection of Antiquities from Central Asia, part I,' *Journal of the Asiatic Society of Bengal* 68/1 extra no. (1899), p. ii.
- 11 These were: unnumbered collection (sent Apr. 1895); G1 (Nov. 1895); M1 (Dec. 1896); M2 (Aug. 1897); G2 (1897); G3 (Oct. 1897); M3 (Nov. 1897); G4 (Nov. 1897); M4 (Nov. 1897); T1 (Dec. 1897); M5 (Dec. 1897); G5 (Jan. 1898); G6 (Jan. 1898); G7 (Feb. 1898); M6–8 (June 1898); G8 (July 1898); G9 (Aug. 1898); M9 (Oct. 1898); G10 (Nov. 1898); M10 (Nov. 1899); M11 (June 1900).
- 12 Sir George Macartney (1867–1945), Agent in Kashgar from 1890 to 1918, originally without any official standing, but subsequently Consul (1908) and then Consul-General (1910–18).
- 13 Lieutenant-Colonel Stuart Hill Godfrey (1861–1941), British Joint-Commissioner in Ladakh in 1895, and Assistant to the Resident in Kashmir between 1897 and 1899.
- 14 Lieutenant-Colonel Sir Adalbert Cecil Talbot (1885–1920), Resident in Kashmir 1896–1900.
- 15 See Sims-Williams, 'Forgeries from Chinese Turkestan in the British Library's Hoernle and Stein Collections', *Bulletin of the Asia Institute* 14 (2000 [2003]), pp. 111–29.
- 16 Hoernle, 'The Weber mss: another collection of ancient manuscripts from Central Asia', *Journal of the Asiatic Society of Bengal* 62/1 (1893), pp. 1–40.
- 17 Hoernle, 'Three further collections of ancient manuscripts from Central Asia,' *Journal of the Asiatic Society of Bengal* 66/1 (1897), pp. 213–60, p. 48.
- 18 Hoernle, 'A report on the British Collection of Antiquities from Central Asia, part I,' *Journal of the Asiatic Society of Bengal* 68/1 extra no. (1899), p. 63.
- 19 Aurel Stein to Ernst Stein, 21 December 1898 [British Academy Archive].
- 20 Hoernle, 'On the Bakhshālī manuscript', in *Verhandlungen des VII. Internationalen Orientalisten-Congresses gehalten in Wien im Jahre 1886. Arische Section*, Wien, 1888, pp. 127–47, 3 plates. This manuscript is now in the Bodleian (MS. Sansk. d. 14).
- 21 Stein to Ernst, 8 April 1891 [British Academy Archive].
- 22 Stein, 'Kleine Mittheilungen', *Vienna Oriental Journal* 5 (1891), pp. 343–5.
- 23 Johann Georg Bühler (1837–98), German Sanskritist and epigraphist, Professor at the Elphinstone College, Bombay and the University of Vienna.
- 24 Jules Léon Dutreuil de Rhins (1846–94), French geographer and explorer.
- 25 Émile Charles Marie Senart (1847–1928), French Indologist and epigraphist.
- 26 E. Senart, 'Le manuscrit Dutreuil de Rhins', in *Actes du Onzième Congrès International des Orientalistes. Paris, 1897. Première section: langues et archéologie des pays ariens*, Paris, 1899, pp. 1–7.
- 27 Sergei Fedorovitch Oldenburg (1863–1934), Russian Indologist, Professor at University of St. Petersburg and Director of the Asiatic Museum from 1916.
- 28 Ármín Vámbéry (1832–1913), Hungarian turkologist and explorer.
- 29 Leopold von Schroeder (1851–1920), Indologist and Professor at Universities of Innsbruck and Vienna.
- 30 Hoernle to Stein from Hotel Metropol Simla, 2 July 1898 [Bodleian: Ms Stein 85, ff. 86–87].
- 31 Stein's list of letters [Bodleian: Ms Stein 129]; also his draft proposal for an expedition to Khotan, 15 July 1898 [Bodleian: Ms Stein 289, ff. 1–14].
- 32 Hoernle to Stein, 17 August 1898 from Hotel Metropol Simla [Bodleian: Ms Stein 278, ff. 2–5].
- 33 Sir William Mackworth Young (1849–1924), administrator, Lieutenant-Governor of the Punjab, 1897–1902.
- 34 Secretary to Lieutenant Governor of the Punjab to Stein, 7 September 1898 [Bodleian: Ms 289, f. 35].
- 35 Stein to the Chief Secretary for the Government of the Punjab, 10 September 1898 [Bodleian: Ms Stein 289, ff. 15–34].
- 36 Sir Thomas William Holderness (1849–1924), administrator, Secretary to the Government of India, Revenue and Agricultural Department, 1898–1901.
- 37 Sven Anders Hedin (1865–1952), geographer and explorer who led four expeditions to Central Asia: 1893–7, 1899–1902, 1905–8 and 1927–35.
- 38 Hoernle to T.W. Holderness, 13 October 1878 from Farnham Lodge Simla (copy) [Bodleian: Ms Stein 289, ff. 36–40].
- 39 Sophie Hoernle to Stein, Saturday [December 31] 1898 [Bodleian: Ms Stein 278, ff. 56–7].
- 40 Stein to Hoernle, 22 Jan 1899 [Bodleian: Ms Stein 289, ff. 114–7].
- 41 Hoernle to Holderness, postmarked Lahore 26 March 1899 (copy) [Bodleian: Ms Stein 289, ff. 89–94].
- 42 Stein to Hoernle, 12 April 1899 from Lahore (draft) [Bodleian: Ms Stein 278, ff. 118–25]; also Stein to Holderness, 25 May 1900 from Srinagar [Bodleian: Ms Stein 289, ff. 146–52].

- 43 Hoernle to Stein, 17 May 1899 from 2 Montague St. London [Bodleian: Ms Stein 278, ff. 126–9].
- 44 Edward William West (1824–1905), Iranist and translator of Zoroastrian texts.
- 45 Hoernle to Stein, 3 August 1899 from 40 St. Giles, Oxford [Bodleian: Ms Stein 278, ff. 131–5].
- 46 British Library: IOR MSS Eur/F302/51. Thanks to Vic Swift of the International Dunhuang Database Project images of these letters can now be viewed with transcriptions (<http://idp.bl.uk>).
- 47 Stein's Register of Central Asian Correspondence [British Library: IOR MSS Eur/F302/13].
- 48 Hoernle, 'A report on the British Collection of Antiquities from Central Asia, part II,' *Journal of the Asiatic Society of Bengal* 70/1 extra no. 1 (1901 [1902]).
- 49 Stein to Hoernle, 11 March 1901 from Camp Bilangan, Keriya Darya [British Library: Mss Eur/F302/51, ff. 9–12].
- 50 Stein's interview with Islam Akhun is described in detail in his *Ancient Khotan: Detailed Report of Archaeological Explorations in Chinese Turkestan*, 2 vols, Oxford, 1907, pp. 507–14; also in his *Preliminary Report on a Journey of Archaeological and Topographical Exploration in Chinese Turkestan*, London, 1901, pp. 64–8.
- 51 Major Henry Hugh Peter Deasy (1866–1947), geographer, explorer and founder of the Deasy Motor Car Manufacturing Company. Deasy travelled in Central Asia and Tibet in 1888 and 1889.
- 52 Stein to Hoernle, 25 May 1901 from Kashgar [British Library: Mss Eur/F302/51, ff. 13–18].
- 53 Stein to Ernst, 4 July 1901 from St. Ermin's Hotel London [British Academy Archive].
- 54 Stein to Ernst, 9 July 1901 from Oxford: 'Hier in Oxford fand ich freundlichen Empfang bei den Hoernles und natürlich besonderes Interesse an den mitgebrachten Specimens, etc. H. empfindet begreiflicherweise tief die durch Islam Akhun's Fälschungen bereitete Enttäuschung, hat sich aber zu meiner Befriedigung capacitiren lassen, und eine peinliche Discussion bleibt mir erspart' [British Academy Archive].
- 55 Stein to Hoernle, 22 July 1901 from Rose Cottage Chislehurst [British Library: Mss Eur/F302/51, ff. 28–30].
- 56 List of Oriental Manuscripts, 1902–10 and Register of Oriental Manuscripts, 1887–1921 [British Library Archive].
- 57 Proceedings for September 1902 (R&A: Archaeology & Epigraphy) [British Library: IOR/P/6368].
- 58 Sims-Williams, 'The British Library Hoernle Collection, part 1', *British Library Sanskrit Fragments*, vol 2, Tokyo, 2009, pp. 1–24, pl. 1–3. The collections were: two unnumbered (sent October 1902 and 1914?); H [Hoernle].142 (June or July 1903); H.143 (February 1904); H.144 (June 1904); H.147 (December 1905); H.148 (April 1906); H.149 (June 1907); H.150 (June 1907); H.151 (February 1908); H.152 (August 1908); and H.156 (June 1911).
- 59 Hoernle, *Manuscript Remains of Buddhist Literature found in Eastern Turkestan*, Oxford, 1916.
- 60 Frederick William Thomas (1867–1956), Indologist, Assistant Librarian, India Office Library 1898, Librarian 1903–27 and Boden Professor of Sanskrit in the University of Oxford, 1927–37.
- 61 Lionel David Barnett (1871–1960), Indologist, Assistant Keeper and Keeper of the Department of Oriental Printed Books and Manuscripts, British Museum 1899–1936, Professor of Sanskrit at University College, London, 1906–17, and Lecturer in Sanskrit at the School of Oriental Studies, London, 1917–48.
- 62 Heinrich Lüders (1869–1943), German Indologist at the Universities of Rostock, Kiel and Berlin.
- 63 Sten Konow (1867–1948), Norwegian Indologist, Government Epigraphist for the Archaeological Survey in India 1906–8, Professor at the Universities of Oslo and Hamburg.
- 64 Ernst Leumann (1859–1931), German Indologist and Iranist, Professor of Sanskrit in Strassbourg and Freiburg.
- 65 Kaikyoku Watanabe (1872–1933), Japanese Indologist and Buddhist scholar.
- 66 Sylvain Lévi (1863–1935), French Indologist, Lecturer at l'École des Hautes Études, Faculté des Lettres of the Sorbonne and Professor at Collège de France, Paris.
- 67 Hoernle to Stein, 27 March and 27 September 1912 from 8 Northmoor Rd. Oxford [Hungarian Academy of Sciences: Stein Correspondance Box 5, ff. 173–4 and ff. 176–7].
- 68 Stein to Ernst, 2 Feb 1899 from Shah Bahlawal Lahore: 'Herren vom indischen Olymp' [British Academy Archive].
- 69 Proceedings for April 1899 (R&A: Archaeology & Epigraphy), nos. 3&4: Employment of Dr Hoernle in England in editing archaeological reports [British Library: IOR/P/5670].
- 70 Stein to Government of Bengal, 8 Aug 1900, printed in Proceedings for January 1901 (R&A: Archaeology & Epigraphy) [British Library: IOR/P/6138].
- 71 Sir George Abraham Grierson (1851–1941), administrator and philologist, superintendent and compiler of the Linguistic Survey of India.
- 72 Stein to George Grierson, 31 July 1910 from Merton College Oxford [British Library: Grierson collection IOR MSS Eur/E233/323, ff. 43–44].
- 73 Stein to L.D. Barnett, 11 December 1918 from Srinagar [British Library: Or.13144, ff. 107–15].