Introduction

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Most economists and historians today conceive of money in narrow terms — probably because they have grown up in the modern world and are used to our system of coins, paper notes, cheques and credit cards. Although economic historians are generally aware that some earlier societies (in Africa, Scandinavia and elsewhere) used other items as money, they do not usually pay much attention to these examples. Few realise that the government of China, governing an empire of some 60 million people during the Tang dynasty (618–907), implemented a complex financial system that recognised grain, coins and textiles as money. The government received taxes in coin and in kind, produced to specific standards (specific widths and lengths of textiles) that would then be redistributed, being used for official salaries and military expenses among other expenditures. Although some of the surviving evidence comes from the Silk Road sites of Turfan, Dunhuang and Khotan in northwest China (where the dry climate has preserved many documents and some actual examples of tax textiles), this multicurrency system was in use throughout the entire empire during the seventh to tenth centuries. At the time, Tang China was possibly the largest economy in the world, rivalled only by the Abbasid Empire (751–1258).

This special issue is devoted to understanding and explicating this multicurrency system, and these essays hope to challenge the prevailing, if sometimes implicit, assumption that coins were a superior form of money and that everyone in Tang China, or even more generally in the pre-modern world, saw the advantages of coins. Coins did have certain advantages: they were durable, recognisable and provided a convenient medium of exchange, especially for smaller transactions. However, there were also disadvantages. A continuing shortage of copper meant that government mints could not produce enough coins for the entire empire, to the extent that for most of the dynasty’s history, coins constituted only a tenth of the money supply. One of the main objections to calls for taxes to be paid in coin was that peasant producers who could weave cloth or grow grain – the other two major currencies of the Tang – would not be able to produce coins, and therefore would not be able to pay their taxes. As the famous Tang poet and official Bai Juyi put it, “But mulberry lands do not produce copper, and ordinary homes do not cast metal” (quoted in Xu Chang’s article p. 223).

As coins had advantages and disadvantages, so too did textiles. If in circulation for a long period of time, they could show signs of wear and tear. Stained, faded and torn bolts of textiles had less value than a brand new bolt. Furthermore, a full bolt had a particular value. If consumers cut textiles into smaller pieces to buy or sell something worth less than a full
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bolt, that, too, greatly lessened the value of the textiles. Unlike coins, textiles could not be used for small transactions; as the Chief Minister Zhang Jiuling (713–741) noted, textiles could not “be exchanged by the foot and the inch” (also in Xu Chang’s article p. 223).

But textiles had some advantages over coins. For a start, textile production was widespread and there were fewer problems with the supply of textiles. For large transactions, textiles weighed less than their equivalent in coins since a string of coins (theoretically 1,000 coins but often less) could weigh as much as 4 kg. Furthermore, the dimensions of a bolt of silk held remarkably steady from the third to the tenth century: 56 cm wide and 12 m long (a bolt of hemp submitted to pay tax was one-fifth longer). The values of different textiles were also more stable than the fluctuating values of coins.1

In sum, there was no clear pecking order for the different forms of money of the Tang dynasty. In certain situations involving large amounts of money, purchasers preferred bolts of cloth to coins since they were lighter and held their value better. Given the shortage of coins, it may have been easier to source large quantities of textiles than large quantities of coins. The government also required the use of textiles for large transactions. Coins, on the other hand, were better suited for smaller transactions, and possibly, given the costs of transporting coins, for a more local usage. Grain, because it rotted easily, was not used nearly as much as coins and textiles, but taxpayers were required to pay grain to the government as a share of their annual tax obligations, and official salaries were expressed in weights of grain.

The Tang dynasty multicurrency system was certainly complex. With coins, textiles, grain and labour (there was a corvée tax, or labour obligation) to deal with, Tang accountants, when drawing up annual budgets, simply combined all of these into a composite unit of account, which then enabled them to reckon in a single unit known as “silk, bolts-hemp, bolts-cotton, hanks, grain, labour-days”. The papers in this special issue draw on the extensive documentary record in classical Chinese, which includes transmitted law codes and institutional encyclopaedias as well as contracts and ledgers excavated from different Silk Road sites.

The Tang were able to use textiles as a type of currency because textiles were a familiar form of money long before the Tang (see Helen Wang’s article, p. 165) and in the period immediately preceding the Tang, as discussed by Valerie Hansen and Rong Xinjiang.

A very wide range of textiles was produced in Tang dynasty China, and different types of textiles had different values. As Angela Sheng suggests, while their values may be calculated in monetary terms, some also had a cultural value, determined by the production time, the inherent value of the materials and the prestige value of the finished piece. As she explains, the more common textiles with simple weave structures were far better suited to serve as money than the rarer textiles with complex weaves whose monetary value would have been more difficult to determine. One of the most challenging tasks facing all the contributors to this special issue was matching terms for textiles in excavated documents and historical texts with extant textile fragments. Zhao Feng and Wang Le’s article discussing a grave inventory listing different types of textiles and comparing the physical textile remains from the same tomb (TAM170 at Astana) is particularly helpful with this problem. The glossary of textile terms at the end of this volume encapsulates their research on this topic.

In actuality, our own currency system today has some similarities even as it is changing in front of our eyes. We use a variety of different forms of money and means of payment. We have cash — coins for small transactions like paying for parking at a meter, and banknotes for other items; cheques and debit/credit cards for other, often larger, types of payments. At the same time, we are shifting to electronic banking and making payments online. Some young people never use cash and do not know how to write a cheque (not to mention a traveller’s cheque), and they are stranded when a vendor demands payment in cash. (When the authors of this article met in New York in the summer of 2012, they visited Papaya King, a famous New York hot dog stand that insisted on cash payments yet would not accept any bill larger than a twenty.)

As important as the study of the Tang system of multiple currencies is, the topic has not attracted much scholarly attention, either in China or the West. The most important studies appeared decades ago. Li Yan’s 1964 essay established the paradigm of coins and textiles circulating together (qianbo jianxing 錢帛兼行).2 In English, the landmark study is Denis Crispin Twitchett’s Financial Administration under the T’ang Dynasty, first published in 1963 and later revised in 1970. Writing in French, Michel Cartier was the first to argue for the advantages of textiles over coins in 1976 (his work is cited above). Accordingly, this special issue frequently cites these pioneering works.

The Life Cycle of a Bolt of Cloth

Let us now turn to tangible, excavated examples of Tang-dynasty tax textiles — not only to allow readers to envisage exactly what these tax textiles looked like but also because as we learn how and why these textiles ended up in the Astana graveyard, 40 km southwest of the modern city of Turfan, some 2,600 km northwest of the Tang capital at Chang’an, we can recover the life cycle of an ordinary bolt of cloth.

In January 1915, during his excavations at the Astana graveyard, Sir Aurel Stein found two burial shrouds bearing short handwritten inscriptions that identified them as tax textiles: that is, lengths of cloth that were used in tax payments. Both pieces of cloth had been woven in central China, not far from the coast, in the late seventh and early eighth centuries.3 The tomb, which Stein numbered Ast.ix.2 (meaning the second tomb in group ix in the Astana graveyard), was found intact and undisturbed. Stein’s eyewitness account of its discovery is probably the closest we will ever get to the original state of a seventh-century tomb at Astana. As Wang Binghua’s article in this special issue shows, over 20 tax textiles have been excavated, all from Astana, but as they were found in tombs that had been disturbed prior to the time of excavation, we do not know the precise circumstances and context of their burial. Although the current location of the tax textiles Stein found is not known,4 he left a characteristically

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4 They are not in the British Museum, the British Library or the Victoria and Albert Museum collections in London. This suggests that they may be in the National Museum, New Delhi, or that they disintegrated soon after discovery or are missing.
thorough record: he took notes at the site, wrote them up at camp after the working day and later worked extensively with colleagues to produce a comprehensive published account. This makes them the best-documented examples of tax textiles. Uniquely, they allow us to chart the life cycle of a bolt of cloth in the late seventh and early eighth centuries, and so provide a perfect introduction to this special issue.

In the case of one textile (Ast.ix.2b.011), five years passed from the time it was submitted as a tax payment (684/685) to the moment of burial (689); the other textile (Ast.ix.2a.07) functioned as a tax payment in 706, but the time of burial is unknown (though probably within 10 years of 706). Let us reconstruct the key stages in the life cycle of a bolt of hemp, focusing on the example paid in 684/685 and buried in 689, and referring to the bolt made in 706 when the comparison is helpful.

Phase 1: Cloth used in tax payments in central China

As the most important information is in the inscriptions on the textiles, let us consider the inscription on the 684/685 bolt:

婺州信安縣顯德鄉梅山里祝伯亮租布一端 光宅元年十一月 日
[hemp-cloth-paid-in-place-of-the-grain tax] from Zhu Boliang of Mieshan ward, Xiande canton, Xin’an county, Wuzhou. [. . .]th day in the 11th month of the 1st year of the Guangzhai reign (684–685)

The inscription on the 706 bolt reads:

婺州蘭溪縣瑞山鄉從善里姚群(?) 廖調布一端神龍二年八月
1 duan of yongdiao bu [cloth-paid-in-place-of-annual-corvée tax] from Yao Qun(?) of Congshan ward, Ruishan canton, Lanxi county, Wuzhou, in the 8th month of the 2nd year of the Shenlong reign (706)

Both inscriptions give the name of the taxpayer, where he lived (ward, canton, county, prefecture), the type of tax payment and the date the tax was paid. The Tang dynasty tax system required all able-bodied males to pay annual taxes of two piculs of grain, half a bolt of textiles (20 feet of silk, or 25 feet of hemp cloth) and 20 days of labour service. In 684/685, Zhu Boliang substituted a bolt of hemp for his grain tax obligation; in 706, Yao Qun (the reading of the second character is not certain) substituted a bolt of hemp for his corvée obligation. Both men lived in Wuzhou prefecture, now modern-day Jinhua in Zhejiang province.

When found, both of these textiles had been cut from their original bolt. The cloth paid as tax in 706 measured 2.31 m long and 1.68 m wide. Stein’s careful measurements reveal that it was made from three “strips of material 57.15 cm wide, sewn together”. Similarly, the 684/685 cloth was cut up into strips to make a shroud measuring 2.75 m by 1.22 m. The surviving 20 examples of tax textiles have varying widths, usually between 55 and

5 The date written on the cloth is the 11th month of the first year of the Guangzhai reign period, which corresponds with the period 12 December 684 to 10 January 685.

6 Stein gave the measurements in feet and inches. For convenience, we have converted them to metric measurements here, including citations from Stein’s work.

7 Stein, Innermost Asia, p. 708.
57 cm, indicating that this was the standard width at the time, but there was some variation depending on where the cloth was woven.

Two great scholars of the Tang writing in English – Denis Twitchett and Wallace Johnson, translator of The Tang Code – have previously commented on the flexibility of Tang institutions. The centre may have postulated a model for the provinces, but by unwritten rule and in practice, the provincial authorities could modify national regulations to suit local circumstances. The Tang Code specified how much tax – in grain, textiles and labour – each household owed, and in return how much land the state would grant each household. In the Turfan oasis, where cultivable land was scarce, each household was allocated much less land than The Tang Code stipulated, but local officials kept scrupulously accurate records of exactly how much land each taxpayer was owed (but in fact would never be allocated). The two inscriptions reflect the same institutional flexibility: the 706 bolt gives the month and year of payment while the 684/685 bolt gives the day, month and year but leaves the space for the day blank. Other inscriptions on tax textiles, in Wang Binghua’s article, show similar variations. The lack of uniformity – even of labels on textiles paid as taxes – is striking given that these were tax payments in a system that prevailed throughout the entire empire.

The two inscriptions on the tax cloths found by Stein at Astana use the measure word duan for ‘bolt’, an indication that Yao Qun and Zhu Boliang both paid their taxes in hemp cloth. The inscriptions record the moment that Yao and Zhu submitted their taxes to the local authorities, but give no indication of what happened once the cloth entered the tax system.

**Phase 2: From tax payments to textiles for sale in the markets of northwest China**

To follow the path of the hemp cloth from central China to Turfan in the northwest, we must understand the shipment of tax textiles during the Tang dynasty, the topic of Arakawa Masaharu’s article. After the Tang dynasty unified central China, it began to expand into the northwest, conquering Turfan in 640, Kucha in 648 and going still farther west later. Initially the Tang military used a militia model in which its soldiers cultivated their own food, but the centre still had to fund the army. In theory, if the Tang had had sufficient reserves of coins, it could have sent them to its armies. But, as Eric Trombert has shown, coins were heavy, and they did not hold their value as well as textiles. In any case, the Tang government was chronically short of coins. When the great encyclopaedia writer Du You described the revenues of the Tang government in the period between 742 and 755, he explained that it had 27 million bolts of textiles, 25 million piculs of grain but only

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9Although Stein described the fabric as cotton, it is more likely to be a finely woven cloth in hemp or other bast fibre. The inscriptions state their origins as Wuzhou, which, according to the Xin Tangshu [New Tang history] (juan 41 – Dili zhi – p. 1063), was known for paying tax/tribute in silk floss, kudzu-vine and hemp cloth. See Wang Binghua’s article in this issue.

2 million coins (several contributors discuss this source). The central government had to send textiles to the northwest, where its armies could use them to buy grain and equipment for its troops and also to pay their salaries. Shipments of cloth to the northwest increased dramatically in the early 700s.

The textile-producing prefectures did not send their textiles to the Tang capitals at Luoyang and Chang’an. Instead, they shipped the cloth overland to Liangzhou (today’s Wuwei county, Gansu province), where the armies sent Journey Overseers to pick up the shipments at Liangzhou and bring them to the front lines. There, armies used the textiles to purchase grain, either from local residents or long-distance merchants. A number of surviving documents provide a vivid record of how these transactions took place.

The tomb of a militia soldier named Zuo Chongxi (d. 673) contains two sections of an account book listing expenses in coins and silk. Tang law prescribed that bolts of silk be used for larger transactions, such as purchases of slaves and animals, and the account book documents that Zuo Chongxi followed this practice when he bought a horse for two bolts and a sheep for one. When he purchased a female slave, he did not have a bolt of degummed silk, as was expected for this particular payment, so he made the purchase in coins. He used bolts of silk to buy commodities such as animal feed, rugs and husked millet but paid in coins for a vegetarian feast – alfalfa, meat, grass and bow strings. Zuo was a soldier who joined a Tang campaign that was heading for Khotan, and, as he passed through modern Tumshuq, Aqsu and Kucha, he recorded his expenses in bolts of government-issued silk, converting them to coins whenever he needed to make smaller purchases.

In addition to these informative ledger documents, Zuo’s tomb also contained 14 intact contracts: 11 denominated in coins, 2 in textiles, and 1, for the purchase of a slave for 6 bolts of degummed silk and 5 coins, expressed in both coins and textiles. The 5 coins functioned as a kind of small change. The pattern is clear: just as the law prescribed, Zuo used textiles for large transactions and coins for smaller ones. None of the documents in the tomb detail the sources of Zuo’s income, but we can assume that he received pay as a soldier and augmented his income by moneylending.

Two ledgers dated 731–732, carefully translated by Rong Xinjiang in this special issue, document the payment of salaries to Tang officials, travel allowances and lodging bills for envoys in both textiles and coins. The first ledger covers the period from the 2nd day of the 9th month to the 10th day of the 10th month; the second from the 12th day of the 10th month to the 20th day of the 12th month. Although the ledgers record 43 different transactions – 22 using degummed silk and 21 using coins – the total number of coins mentioned is 1,390, worth less than five bolts of degummed silk (the exchange rate was 300 coins per bolt); the textiles listed in the first ledger totalled 48 bolts and those in the second 255 bolts. These materials confirm our impression that textiles were used for large transactions, coins for smaller ones.

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12The Chinese term is lian 練. The significance of silk that has been degummed is explained in Angela Sheng’s article in this special issue.

13Some 14 contracts from Astana document Zuo Chongxi’s moneylending; hence the assumption.
The Tang state received a wide variety of textiles as tax payments because many prefectures submitted local weaves rather than the standard bolt of silk or hemp. One payment of 743 records the payment to a garrison near Dunhuang in four types of textile – xu-batting (used for quilts) from Henan and Shaan prefectures, bolts of plain silk dyed red and bolts of plain silk dyed green, and hanks of silk floss. We should not be surprised to see that these exact varieties, as well as others, appear in a market register dated 743 from Turfan, some 550 km from Dunhuang. Since the army paid its soldiers’ salaries and purchased grain using tax textiles, it was natural that the soldiers and garrison officials would use them when making purchases from local vendors. In this way, tax textiles entered the local economy. The local vendors, in turn, put them up for sale in local markets. We can assume that the tax textiles found in the tomb Ast.ix.2 were purchased in the Turfan market five years after having been originally submitted by Zhu Boliang and Yao Qun, and then transported to the northwest to finance the military, for the specific purpose of making shrouds for the dead.

Phase 3: Burial shrouds in the Astana graveyard, Turfan

The shrouds were found in Ast.ix.2, the tomb of Fan Yanshi 汜延仕 (d. 689), his wife Lady Dong 董 (Buddhist name Zhenying 真英) (d. 667), both natives of Gaochang, and another unidentified female (probably also his wife or concubine). The tomb was one of a group of over 20 seventh-century tombs belonging to high-ranking officials and their wives, in the central part of the Astana graveyard. This was the final resting place for many citizens of Gaochang, and hundreds of tombs here have been excavated, but Ast.ix.2 is unique in being the one of the few tombs that was not disturbed prior to excavation. It dates about a hundred years later than the elaborate sixth-century tomb 72TAM170, discussed by Zhao Feng and Wang Le, and, compared with that tomb, appears remarkably modest for a high-ranking official and his wives. There was no burial inventory and the burial goods are sparse; however, as the tomb was found intact, we can assume that they form a complete assemblage.

The intact chamber of tomb Ast.ix.2 measured about 3 m x 2.75 m. Towards the back of the chamber was a platform about 1.37 m high, and two of the coffins in the tomb (coffins a and b, belonging to the unidentified female and Fan Yanshi, respectively) rested on this platform; the third (c, belonging to Lady Dong) had been placed on the ground in front of it. Stein labelled the coffins from the front of the tomb to the back wall: coffin (a) was closest to the entrance, coffin (b) was in the middle, its head (the broadest end) to the west, and coffin (c) was closest to the back wall of the chamber.

Fan Yanshi’s coffin (b) was 2.45 m in length; the women’s coffins were almost 1.85 m long. Behind the head of Fan’s coffin, placed against the western wall, was a low pedestal made of thin carved boards painted red, which was laid with an assortment of decorated wooden food bowls, containing grapes, plums, pieces of meat and other food items. Behind the head of Lady Dong’s coffin (c), and also placed against the western wall, was a low platform about 0.6 m wide, laid with pottery jars, dishes and saucers, all of which contained the remains of an oily substance or food. There were also some figurines, made of paste or dough, a small model of a cart and some roughly circular pieces cut from bark which Stein assumed were intended to represent coins (similar ‘coins’ made of gourd skin were found in Astana tomb no. 170, excavated in 1972 [72TAM170]). Grains of wheat were strewn by the platform. In
the north-western corner of the chamber was a wooden urn, painted and decorated with white spots, and containing a wooden duck.

Stein was particularly struck by the wall hanging, on the back wall of the chamber, still in place after 12 centuries. The hanging, made of ivory-coloured silk with coarsely painted figures of Fu Xi and Nü Wa, their serpent bodies intertwined, was fastened to the wall with rough wooden pegs. Stein noted that the hanging would originally have measured about 2.13 m in length, and 1.07 m across, and observed that the width of the silk used, 0.44 m, differed from that usually seen in silk textiles of Han and Jin times, such as was prevalent in the silk banners found at Dunhuang.

Fan Yanshi’s coffin (b) was covered in “a sheet of muslin-like silk” painted with the figures of Fu Xi and Nü Wa. According to Stein: “The lower portion of this cover had become very brittle and decayed, and a fringe of dark red silk on its edges broke away practically into dust when touched. Underneath this painted cover lay a plain sheet of creamy silk, and this again rested on a sheet of ‘Khâm’, bearing a Chinese inscription and seal stamps”. This was the tax cloth Ast.ix.2.b.011. Stein used the word “khâm” in its early-twentieth-century meaning of textiles that officials had stamped to show that the tax due on them had been paid. The stamps on the Tang textiles may have resembled the Qing dynasty “khâm” textiles with which Stein was familiar, but they differed in nature. The Qing stamps indicated that an ad valorem tax had been paid, while the Tang stamps indicated that the silk was paid as part of each householder’s annual tax obligations.

The unidentified female’s coffin (a) was painted a reddish brown and covered with a plain sheet of fabric (Stein described it as “cotton”, but it is more likely to have been a woven hemp fabric) that reached down almost to the floor. On one edge were a handwritten Chinese inscription and several seal impressions stamped in red ink. This was the tax cloth Ast.ix.2.a.07. The shroud of “white Khâm” covered an assortment of rags from old garments, including some “silk pieces, plain and in damask”. Her head was wrapped in silk, and under this was a face cover “made up of two pieces of figured silk, both of ‘Sasanian’ type and recovered only in fragments”. Her head was supported from the left by a cushion covered with “white Kham”, stuffed with chaff. Buried with her were a spindle and a wooden measure (found beside her head), and two small bags made of resist-dyed silk, and a mass of small cuttings from various silks and other fabrics.

This joint burial is intriguing. The male occupant was a high-ranking official, yet the burial appears modest. However, Ast.ix.2 contained quite a wide range of textiles, described as various types of silk, cotton and canvas, but these were intentionally presented in a minimal way. Indeed, the rags and small pieces of patchwork have none of the splendour of the vivid burial inventories and fancy silk clothing found in Tomb no. 170. However, if they were examined in the same detail with which Zhao Feng and Wang Le have analysed the silks from Tomb no. 170, they might reveal a similarly broad range of silk types, weaves and designs. The fact that many are in small pieces may simply demonstrate the Buddhist beliefs of the occupants, as confirmed by the use of their Buddhist names, and the Chinese document tucked into Lady Tong’s clothing which records the meritorious copying and reciting of Buddhist sutras by monks on her behalf. The burial reveals a conscious frugality.

Fan’s epitaph suggests that he was a local man, who had served in Gaochang all his life, and thus it seems likely that the life cycle of this bolt of hemp cloth started in tax collection
in Wuzhou, that it was transported to Liangzhou, then further to the north-west and finally
was put up for sale in a market near Turfan. The inscriptions on these two burial shrouds
provide official confirmation that the textiles were used in tax payment, but the context of
the burial is a stark reminder that the function of an object can change over its lifetime, and
that the context of archaeological finds of textiles (even ones with inscriptions recording
their use in payment!) is crucial. While textiles (and other objects) may have a monetary and
functional value, they may also have a cultural and religious value.14

Phase 4: The end of the Silk Road

The articles in this special issue show how the Tang dynasty multicurrency system worked
and, in particular, how textiles functioned as money on the Silk Road. The final two articles
demonstrate the effect of political changes on this system.

Duan Qing’s survey of textiles in Khotan, shows, perhaps more than any of the articles, the
impact of political changes on an indigenous textile industry with its own textile traditions
and products. Surveying official documents, including records of legal cases and contracts, she
shows how there were two concurrent tax systems in operation at Khotan – one Khotanese,
which was payable in coin, and one Chinese, which was payable in grain and later in textiles.
There is evidence of a trend towards standardisation in the production of textiles at Khotan,
with common elements of measurement and vocabulary relating to silk production, showing
that the Khotanese textiles were adapted to match the Chinese standards. Duan Qing also
demonstrates the impact on economic life of the new political systems introduced by the
Tibetan rulers, showing how the imposition of a new social structure changed the traditional
textile industry at Khotan.

Eric Trombert closes the volume by analysing the monetary system at Dunhuang in the
ninth and tenth centuries, when coins had fallen entirely from use. Surviving documents
from the ninth century show that almost all transactions involved payment in grain; in the
tenenth century silk reappears but is not used as frequently as it had been earlier. The tenth
century also sees the use of cotton and woollen textiles as money, and these different types of
textiles continued to be used – as was silver – in succeeding centuries. As Trombert suitably
concludes his paper and this volume: “The marvellous qualities of silk ensured that it could
not die out completely as a commodity, but the time ‘when silk was gold’ was over”.

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14 Or they may be (literally) beaten to a pulp and turned into paper. Prof. Kazuyuki Enami of Ryukoku
University, Japan, has discovered that fibres of indigo-dyed hemp cloth from soldiers’ uniforms were recycled to
produce rag paper for use by the military in Turfan. (Personal communication with Helen Wang, London, 24
September 2012).