Textiles as Money on the Silk Road?

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The abstract concept of "the Silk Road" linking east and west shapes many popular narrative histories, encouraging readers to think dreamily of dazzling silks carried as luxury trade items on the backs of camels over sun-scorched sand dunes, and conveniently skirting more complex issues such as political, military, religious and cultural barriers. The actual mechanics of how any trading and other financial or economic transactions took place are seldom addressed, and references to money are few and far between.¹

The aim of our project was to bring together specialist knowledge, not only of the Chinese dynastic histories but also of the archaeological finds of contemporary documents and textiles and ask "how did textiles function as money on the Silk Road?" It was important therefore at an early stage to establish a framework in which to consider textiles as money.

"Money?" or "currency?" Although "money" and "currency" are frequently used interchangeably (even the *Oxford Dictionary of Economics*, defines "currency" as "another word for money"), there are subtle differences. "Money" is more readily associated with the idea of commodities, in whichever form they may be. "Currency" carries the notion that something is current, and has been endorsed for standard use. These are, of course, English words, and the etymologies of the equivalent words for "money" in different languages carry their own cultural histories.² Throughout this special issue, we have chosen to use the word "money" for the simple reason that it encouraged us to think of money in the broadest sense, and to open our minds to new ways of thinking.

What is money? Coins, banknotes and plastic cards might spring to mind, but in fact almost anything can function as a money object. This is true across time and space, and when it comes to understanding money at a particular point in history or in a particular part of the world, the context is everything. Coins – small pieces of metal with distinguishing features, such as a particular alloy, size, weight, symbolic imagery and inscriptions – have served as money objects for over 2,500 years largely because they are durable, countable and recognisable. They are specially manufactured to function as money, and it is not surprising, given their long history and widespread use, that we have a very deep association of money with coined metal. James L. A. Webb, writing about West African money, is right to regard

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¹A notable exception is Valerie Hansen's latest book, *The Silk Road: A New History* (Oxford, 2012).

²As Joe Cribb notes, the etymologies of terms for money in different languages are metaphors relating to monetary experiences of the past. See his series of four articles entitled "Money as Metaphor" in the *Numismatic Chronicle*: part 1 (money is justice), *NC* 168 (2005), pp. 417–438; part 2 (money is order), *NC* 169 (2006), pp. 493–517; part 3 (money is time), *NC* 170 (2007), pp. 361–395; part 4 (money is power), *NC* 171 (2009), pp. 461–529.

the association of money with coined metals as a Western view,³ but it is also largely true of China, which has similarly enjoyed a long history of coinage, and where far more has been written about coins than about other forms of money.

What about the concept of money? It is possible to say in most languages "I have money" and "I have no money", so surely there must be some common understanding of the concept of money? In these simple statements, the implication is whether the person can or cannot use "money" to get something else, perhaps goods, services or status. Money is an abstract concept and one that has proved remarkably difficult to define. The discourse on the definition and nature of money has been inspired by detailed research in various specialist disciplines, and in all cases the perspective of the discussant is crucial to understanding his or her view. For example, economists and anthropologists have not always seen eye to eye. ⁴ Their perspectives relate directly to the contexts in which they work.

For economists and bankers, money is traditionally defined by four attributes: as a medium of exchange, a standard of value (sometimes substituted with unit of account), a store of wealth and as a standard of deferred payment. These attributes were formulated in the West to describe European capitalist and market contexts. By the 1940s economists seeking to understand non-Western societies looked at so-called primitive societies through the work of early ethnographers, and categorised non-Western money as "primitive money". The result was a much broader analysis of money that looked beyond coins and paper money. Today, anthropologists generally accept the economists' and bankers' four attributes of money and add a fifth: payment. In addition, they draw attention to cultural and symbolic aspects of money.

Paul Einzig's *Primitive Money* (1948) identified eight critical aspects of money: (1) utility; (2) portability; (3) indestructibility; (4) homogeneity; (5) divisibility; (6) stability of value; (7) cognizability; and (8) liquidity.⁵ How do textiles match up to these eight critical aspects? Rather well, it seems. It is easy for a non-specialist to consider that textiles can be woven on looms of specific width, to a specific length, so that they are of a recognisable standard size and quality. The lengths are measurable and divisible. The labour involved in their production can also be measured. The woven textiles can be rolled up for storage, can be carried from place to place and can used for making clothes and other items. They are durable in most conditions (although some are more susceptible than others; for example, wool is particularly susceptible to moths). The most difficult aspect to address is stability of value, which we can imagine is largely dependent on supply and demand, with regular resources of materials and labour needed to produce and supply them. These aspects are discussed in greater detail in Angela Sheng's article in this special issue.

Textiles also match up well to the economists' and bankers' four attributes of money. However, because we are not familiar with using textiles as money today, it is more challenging to think of them in these ways. Money is issued and controlled by an authority,

³James L. A. Webb, "Towards the Comparative Study of Money: A Reconsideration of West African Currencies and Neoclassical Monetary Concepts", *The International Journal of African Historical Studies* Vol. 15, no. 3 (1982), pp. 455–456.

⁴For example, see Jacques Mélitz, "The Polanyi School of Anthropology on Money: an Economist's View",

⁴For example, see Jacques Mélitz, "The Polanyi School of Anthropology on Money: an Economist's View" *American Anthropology*, new series, Vol. 72, No. 5 (Oct 1970), pp. 1020–1040.

⁵Paul Einzig, *Primitive Money*, (London, 1948).

with an administrative system, which seeks to maintain a balance of supply and demand, and to regulate the amount of money in circulation. Andrew Burnett and Joe Cribb, numismatists with special interests in Roman coins and Asian money, respectively, highlight the importance of authority, convention, recognition and regularity. Burnett points out the importance of the political authority of the issuer of a coinage. Cribb focuses on the notion of payment, defining money as "a convention established in relation to payments which dictates that particular objects with agreed measures of value are recognised as the regular means of discharging the obligation to pay". When raising the question of authority, Burnett refers explicitly to the issuer. Cribb, on the other hand, refers implicitly to the controller. Economists also address these issues but refer more usually to "credibility" and "trustworthiness". The authors of this volume have asked similar questions about the use of textiles as money on the Silk Road.

Textiles functioned as money for well over a thousand years in China. Silk and hemp textiles were important forms of money in the pre-Qin period (before 221 BCE). There was extensive use of coinage in the Han dynasty (221 BCE – 220 CE), but the fall of the Han dynasty led to disruption in terms of coinage, and textiles and grain once again functioned as money. Thus, there was a precedence for the use of textiles as money in the Tang dynasty. It is well known that coins and textiles were the two concurrent forms of money in the Tang dynasty (the Chinese expressions being qian bo pingxing benweizhi 錢帛平行本位制; qianbo jianxing 錢帛兼行), and that silk was more widely used as money than coins. Why did the Tang dynasty maintain this system? Who determined that textiles should function as money? What measures were put in place to ensure that the system could be maintained? Who controlled the system? To what extent did they seek to control/manage the system, especially since some textiles were likely to disappear from circulation (because they also have non-monetary functions: for example, for clothing and religious/ritual use; and they are organic and liable to deteriorate over time). What were the advantages and disadvantages of these system(s) to the producers, controllers and end-users of textiles as money?

⁶Andrew Burnett, *Coins* (London, 1991). For other publications introducing coins and money, see also Philip Grierson, *Numismatics* (Oxford, 1975); and Chris Howgego, *Ancient History from Coins* (London and New York, 1995); also Catherine Eagleton and Jonathan Williams (eds), *Money. A History*, (London, 1997).

⁷Joe Cribb, "What is money?" and "Origins" in Joe Cribb (ed.), Money – from Cowrie Shells to Credit Cards (London, 1986). Also, Joe Cribb "Money as Metaphor", Numismatic Chronicle 186 (2005), p. 431.

⁸I am grateful to Kent Deng, London School of Economics, for pointing out this association.

⁹See the work by Qiu Xigui, Huang Xiquan, Ai Junchuan and Zhou Weirong in Zhongguo qianbi xuehui (ed.) 中国钱币学会, Zhongguo qianbi lunwenji 4 中国钱币论文集 4 (Beijing, 2002). See Qiu Xigui 裘锡圭, "Xian Qin gushu zhong de qianbi mingcheng 先秦古书中的钱币名称" [The names of coins in the ancient books of the pre-Qin period], pp. 6–22; Huang Xiquan 黄锡全, "Xi Zhou huobi shiliao de zhongyao faxian – Kang ding mingwen de zai yanjiu" 西周货币史料的重要发现 [An important discovery of historical materials relating to money in the Western Zhou dynasty: a new study of the inscription on the Kang din-vessel], pp. 49–60; Ai Junchuan 艾俊川 and Zhou Weirong 周卫容, "Bu, bubi yu zaoqi huobi xin lun" 布,布币与早期货币新论 [New view on the cloth, spade money and early currency], pp. 23–37.

¹⁰Peng Hsin-wei, A Monetary History of China, translated by Edward H. Kaplan (Bellingham, 1994).

¹¹Denis Twitchett, Financial Administration under the T'ang Dynasty (Cambridge, 1970), Chapter 4, "Currency and Credit", pp. 66–83.

¹²Huang Zongxi 黄宗羲 (1610–1695), Ming yi dai fang lu — Cai ji yi. 明夷待访录·财计— (1633). Translated into English by William Theodore de Bary, Waiting for the Dawn: A Plan for the Prince (New York, 1993). Cited by Li Yan 李埏, "Lüelun Tangdai de 'qian bo jianxing'" 略论唐代的"钱帛兼行", first published in Lishi yanjiu 历史研究 (1964) No. 1, pp. 169–190, with a revised version in his collected works entitled Buzi xiaozhai wencun 不自小斋文存 (Kunming, 2001), pp. 236–272. Also available at: http://www.guoxue.com/wk/000426.htm.

The results of our project confirm that it was the Tang government that determined that coins and textiles should function as money, and that it controlled and maintained the system. There was historical precedence: the Tang government inherited a system in which textiles served as money, and although it installed a brand new system of coinage just three years after the founding of the dynasty (the Kaiyuan tongbao coins were issued from 621), the Tang dynasty continued to experience a persistent shortage of coins, and of bronze to make them. Furthermore, there was a high cost attached to making and distributing low-value coins, and there were issues with counterfeiting. Practical suggestions, such as allowing private coining were rejected, not least because of the long-held principle of coinage being the privilege of the ruler. 13 Although the business of producing coins is usually a profitable one, this was not the case for the Tang government. As Xu Chang shows in her article, the discussions at the heart of the Tang empire reflected not only the pressing needs of the period but also the strength of the historical tradition and the cultural mindset of the Tang officials, particularly in their reluctance to abandon textiles as money and move to a coin economy. The main resistance to this issue focused on the taxpayer: while people could pay taxes in grain and textiles which they had produced locally (i.e. taxes in kind), they did not have the wherewithal to make coins and thus would not be able to pay taxes in coin. The government maintained a system of receiving textiles as tax payments, and redistributing those textiles, for example, in payments for military expenditure and salaries. Specific regulations and procedures for this system were determined by the Tang government, with the intention that it should be managed and controlled in this way across the Tang empire.

If coins and textiles both functioned as money, then what about a unit of account? This is an important question, especially when we consider the size of the Tang empire and that its regulations and administrative procedures were intended to be followed throughout the empire.

As the economist Jacques Mélitz notes, units of account have existed throughout history. 14 They may originally correspond with tangible money objects, but over time they tend to become more abstract. Mélitz argues that "we should restrict the term money to media of exchange and means of payment, and let the unit of account speak for itself'. He writes that the integration of the modern Western economy is largely due to the widespread unit of account and monetisation of practically the entire payments and exchange sphere. He considers the functions of the money objects in this context, regarding coins, paper money and cheque accounts as means of payment and media of exchange but not as standards of deferred payments and stores of value. He distinguishes these money objects from savings deposits, which he regards as a store of wealth, on the basis that they work in a different way, offering guarantees and interest. Furthermore, he notes that our modern forms of money are suited to particular types of payments: we tend to use coins for small transactions, banknotes for larger transactions and cheques/bank transfers for even larger amounts, although they are not necessarily interchangeable in different spheres of use. 15 Although Mélitz is discussing

¹³Twitchett, Financial Administration, pp. 66-83.

¹⁴Jacques Mélitz, "The Polanyi School of Anthropology on Money". ¹⁵For example, the term 'legal tender' refers specifically to moneys that can be paid into court by a debtor. Current English law specifies the following notes and coins (and respective amounts) as legal tender: Bank of England £5, £10, £20 and £50 notes are legal tender for payment of any amount in England and Wales

modern money, which involves abstract units of account rather than tangible money objects, his discussion is pertinent to money on the Silk Road.

As Denis Twitchett has pointed out, 16 and as the articles in this issue show, the Tang government was heading in the direction of a fully monetised (i.e. coin) economy, but was not yet in a position to abandon textiles as a form of money. This is clear in the edicts of 732 and 811, which show that the authorities had to require the use of textiles. As Yang Lien-sheng summarised,¹⁷ the decree of 732 insisted that silk and hemp should be accepted as media of exchange together with coins, and the decree of 811 ordered that payments valued at over 10 strings of coins (theoretically, each string contained 1,000 coins) should be made in silk or grain. These edicts were issued as part of the system of managing both coins and textiles as money, and the fact that they needed to be issued reveals that there were imbalances. Part of the problem at this time was that much of the decision-making took place in the capital where there were plenty of coins in circulation, and officials based in the capital were not always aware of the situation further afield. When the economic historian Li Yan set out to understand how coins and textiles functioned concurrently as money in the Tang dynasty, he found that there was an enormous difference between the urban areas (more coin use) and the rural areas (less, or no, coin use). 18 Michel Cartier's study of the functions and fluctuations in the value of bronze coins during the Tang dynasty resulted in another two pertinent conclusions: that the value of textiles in the Tang dynasty was much more stable than that of coins, but that bronze coins continued to serve as the standard unit of account.19

However, coins were not the only unit of account, and Tang dynasty account-keeping was more complex than that. Taxes were collected in coin and in kind. In this special issue Arakawa draws our attention to Du You's encyclopaedia which gives details of the receipt and expenditure of tax textiles in the early eighth century.²⁰ Hemp cloth and silk were denominated in bolts; silk floss, silk thread and hemp thread in hanks; grain in piculs; and coins in strings of 1,000 coins. All of these could be given in full units, or in smaller units: thus, silk and hemp were measured in bolts (pi and duan, respectively), decafeet (zhang), feet (chi) and inches (cun); silk floss, silk thread and hemp thread was in hanks (tun) and ounces (liang); grain was in piculs (shi), pecks (dou) and pints (sheng); coins were in strings (guan) and individual coins (qian). When aggregating these figures, officials simply added the full units together as appropriate, thus producing a multiple unit of account. Thus, we see in the

(but they are not legal tender in Scotland and Northern Ireland). Coins are legal tender throughout the UK for the following amounts: £5 (crown, rarely seen – for any amount), £2 and £1 coins (for any amount); 50p coins, 25p (crown, rarely seen) and 20p coins (for any amount not exceeding £10); 10p, 5p coins. See http://www.royalmint.com/corporate/policies/legal_tender_guidelines.aspx (accessed 1 September 2009)

¹⁶Twitchett, Financial Administration, pp. 66-83.

¹⁷Yang Lien-sheng, Money and Credit in China (Cambridge, MA, 1952), p. 17.

¹⁸Li Yan, "Luelun Tangdai de 'qian bo jian xing'", *Lishi yanjiu* (1964) Vol. 1, pp. 169–190; http://www.guoxue.com/wk/00426.htm

¹⁹Michel Cartier, "Sapèques et tissues à l'époque des T'ang (618–906). Remarques sur la circulation monétaire dans la Chine médiévale", *Journal of the Economic and Social History of the Orient*, Vol. XIX, Part III (1976), pp.323–344. See also Michel Cartier, "À propos de l'histoire du coton en Chine. Approche technologique, économique et sociale", *Études Chinoises* Vol. 13 (Spring-Autumn 1994), pp. 417–435. http://hal.archives-ouvertes.fr/docs/oo/17/85/86/PDF/Cartier_Histoire_du_coton.pdf

²⁰See fn13 in Arakawa's article in this special issue, in which he refers to Du You, *Tongdian*, 6.34a-b *Shitong* edition (Shanghai, 1935–1936).

accounts the terms *pi-duan*, and also *pi-duan-tun-guan-shi*. However, when officials had to convert from one to the other, they calculated the value in strings and coins, and then used those values to convert into another unit. This shows that coins were the standard, most important, unit of account. As Trombert notes in this special issue, although coins were the main unit of account, the money in circulation was very often the bolt of silk.²¹ We can see this in a document dated 745 CE, in which a vice-commissioner's salary is expressed in terms of grain, the value of which is reckoned in terms of coin, and then commuted into silk for payment.

The discussion above has dealt with issues of state taxation and redistribution. Of course, these are major features in the organisation of an economy at macro-level. But what happened further away, at the micro level? We have already seen, through Li Yan's study, that there were far more coins in use in the cities than in the rural areas. Is there any evidence of barter? In the traditional view, money develops from self-subsistence to barter to commodity money to fiat money (i.e. where money is not backed by a commodity). However, the anthropologist Caroline Humphreys argues that barter should be seen as a form of non-monetary exchange that can, and does, co-exist with a fully monetised economy. She notes that barter may occur when there is a lack of hard currency reserves, or where there are different cultural conceptions of values of different economic systems, adding that the exchanged objects have direct consumption values for the participants.²²

The best way to examine payments, transactions and exchanges on the Silk Road is to look at the documentary evidence for such activities. For example, Valerie Hansen's study of contracts in medieval China draws a range of exchanges to our attention, and points out the standard procedures and stock expressions associated with contracts. Many contracts found at Turfan include the obligatory statement "The state has its way; the people have their way". The extensive use of contracts found at these sites, and the stock phrases used in them, indicate that there was a formal system in which regular and irregular exchanges were recorded and safeguarded (with the threat of penalties for breaking the contractual arrangement). Thus, we might infer that similar exchanges also took place at a lower level for smaller, more everyday, transactions, for which there was no need to produce contractual records. On this basis it is highly likely that barter co-existed alongside the more standard forms, uses and exchanges of money on the Silk Road.

What about the end users? What was money needed for? Katō classified the monetary functions of silk in the Tang dynasty as belonging to the spheres of "public economy" and "private economy".²⁴ According to Katō, the public economy included taxation, forwarding of local revenues to the central government, tribute to the imperial courts, general state expenses and military expenses. As part of the personal economy, Katō included bribes concerning public affairs or gifts to procure favour in private relations; gifts out of courtesy

²¹In terms of physical money objects, these would have been the Kaiyuan tongbao and later coin types.

²²Caroline Humphreys and Stephen Hugh-Jones (eds), Barter, Exchange and Value. An Anthropological Approach (Cambridge, 1992), especially Chapter 1, "Introduction: Barter, Exchange and Value".

²³Valerie Hansen, Negotiating Daily Life in Traditional China: How Ordinary People Used Contracts 600–1400 (New Haven and London, 1995). See also my Money on the Silk Road: the Evidence from Eastern Central Asia to c. AD 800 (London, 2004).

²⁴Katō Shigeshi 加藤繁 (b.1880), *Tang Song shidai jin yin de yanjiu*, Chapter 2, part 6: Jianbo yu jin yin de bijiao. Cited by Li Yan.

and favour; donations to temples; remunerations or tokens of gratitude; prizes; travelling expenses; payments for commodities; indicators of value; payments of freight charges; loans; and hoarding. ²⁵ It is helpful to consider these two categories of public and private economy, not just in terms of the functions of textiles, but also in terms of the great variety of textiles that were produced during the Tang dynasty. Angela Sheng's article in this issue approaches these functions from the point of view of a textile historian, and focuses on the question of how to measure the value of different kinds of textiles – from the plainer, regular weaves to more exclusive, prestige textiles. While it is logical to expect to find a much greater use of the plainer, regular weaves for the more regular and routine payments, she rightly points out that different cultural associations of both money and textiles can influence our understanding.

To put it simply then, textiles and coins were the two main forms of money during the Tang dynasty and on the Silk Road. They were the main physical money objects, and, as the edicts indicate, they were used in particular spheres of payment of exchange. Coins and textile lengths were also units of account. To date, most studies of money on the Silk Road have focused almost exclusively on the coin evidence.²⁶ There are three simple reasons for this: first, the deep association of coins with money (after all, coins are created specifically to function as money); second, that the authors of those studies have tended to be numismatists;²⁷ and third, because plenty of coins have turned up in the right kinds of places.²⁸ Examining the textile evidence from sites is more difficult: textiles were/are not produced solely to function as money; the people who study them tend to be textile historians who often have specific interests that are unrelated to money; and textiles are organic materials and therefore fragile and perishable. Coins found in archaeological contexts can usually be considered as coins and evidence of money; with textiles found in archaeological contexts we cannot be so sure.

²⁵As summarised by Yang Lien-sheng, *Money and Credit in China. A Short History*. Harvard-Yenching Institute, Monograph Series Vol. XII, (Cambridge, MA, 1952), p. 17.

²⁶For studies of money on the eastern (Chinese) part of the Silk Road, see Jiang Qixiang, "Xinjiang gudai qianbi de faxian yu yanjiu", *Zhoushan Qianbi* (1990) No. 1, pp. 6–11; (1990) No. 2, pp. 3–10; (1990) No. 3, pp. 8–13; (1990) No. 4, pp. 3–11; Dong Qingxuan and Jiang Qixiang, *Xinjiang Qianbi/Xinjiang Numismatics*, (Urumqi and Hong Kong, 1991); François Thierry, "Entre Iran et la Chine, la circulation monétaire en Sérinde du Ier au IXe siècle", in J.–P. Drege (ed.), *La Sérinde, terre des échanges: art, religion, commerce du Ier au Xe siècle*, (Paris, 2000), pp. 121–147.

²⁷Numismatics is the study of coins. Numismatic studies have made significant contributions to the early history of Central Asia and the Silk Road, particularly in the case of the Kushan dynasty, where it is primarily the coin evidence that has enabled scholars to establish a chronology of the Kushan rulers; see, for example, the illuminating work by Joe Cribb, "The Early Kushan Kings: New Evidence for Chronology. Evidence from the Rabatak Inscription of Kanishka I", in Michael Alram and Deborah E. Klimburg-Salter (eds), Coins and Chronology. Essays on the Pre-Islamic History of the Indo-Iranian Borderlands (Vienna, 1999), pp. 177–205; also Elizabeth Errington and Joe Cribb (eds), with Maggie Claringbull, The Crossroads of Asia: Transformation in Image and Symbol, (Cambridge, 1992); Elizabeth Errington and Vesta Sarkhosh Curtis, From Persepolis to the Punjab, (London, 2007) (revised edition, 2010).

2010).

28 For example, Sir Aurel Stein collected over 4,000 coins; see the author's *Money on the Silk Road. The Evidence from Eastern Central Asia to c. AD 800* (London, 2004), which includes a catalogue of those coins, and references to other collections. The most important collections of 'Silk Road coins' in China are in the National Museum of Chinese History and the China Numismatic Museum (both in Beijing); the Xinjiang Museum (Urumqi), the Gansu Provincial Museum (Lanzhou) and the Shanghai Museum.

How do textiles as money on the Silk Road compare with other areas of the world?

The fact that textiles functioned as money on the Silk Road should come as no surprise to those familiar with Chinese history. There were not only precedents for the use of textiles as money on the Silk Road; there was a very significant acceptance and understanding of the role that textiles could, and did, play in the financial and economic affairs of the state.

But in the West this is not well understood, and there is probably a greater familiarity with the concept of textiles as money in eighteenth/nineteenth-century Africa than in Tang dynasty China. Furthermore, most money objects that are not circular metal coins have at some stage been labelled as "primitive money", a pejorative term which for a long time relegated them to a lower status than coins. In the case of China, it is difficult to reconcile the word "primitive" with the sophistication of the Tang dynasty.

The result is that so-called primitive money (including textiles) has been overlooked by numismatists and historians, and has been studied in greater detail in other disciplines. In the case of textiles, some of the most significant advances have taken place in the context of African money, where the field has been dominated by anthropologists and textile historians, and the earliest primary sources are the eyewitness accounts written by Europeans who travelled to Africa in the nineteenth and early twentieth centuries. This contrasts sharply with the situation in China, where the rich historical sources, written by indigenous Chinese authors, locate the subject firmly within the disciplines of history and economic history. The contrast is even sharper when we consider the vast body of contemporary documents and textile finds that are available to a study of textiles as money on the Silk Road.

Textiles have functioned as money in different temporal and cultural contexts around the world. While the source materials and approaches to studying textiles as money may differ, it is interesting to see how others approach this material, and to note how the role of textiles as money in other societies resembles the use of textiles in Tang dynasty China.

For example, in the Viking world, in the twelfth and thirteenth centuries, a type of woollen cloth known as *wadmal* (from Norse *wad* meaning 'cloth' and *mal* meaning 'measure') was used as a measure of value alongside silver coins, which were the main form of money. *Wadmal* was a 2/2 twill fabric woven from sheep's wool on warp-weighted looms by women in their homes. It was used for sails on boats, for clothing and for other purposes, and was also an export good. When the value of silver coins fell, values were reckoned increasingly in *ells* (lengths of 56 cm) of *wadmal*. The lengths, width, thread count and weight of different qualities of *wadmal* were fixed by law.²⁹ The 'law ounce' was set at 6 *ells* (3.36 metres), which David Friedman regards as a unit of account. During the twelfth and thirteenth centuries, the value of one ounce (*eyrir*) of silver was 6–7.5 *ells* of *wadmal*.³⁰

²⁹Martha Hoffmann, "The Warp Weighted Loom: Studies in the History and Technology of an Ancient Implement", *Studia Norvegica* 14 (Oslo, 1964), pp.194–226. On *wadmal* in Iceland, see Elsa Gupjonsson, "Some Aspects of the Icelandic Warp-Weighted Loom, Veftadur', *Textile History Vol.* 21, No. 2 (Autumn 1990) pp. 165–179. On *wadmal* generally, see "Wadmal, wadmol" in S. William Beck, *The Draper's Dictionary: A Manual of Textile Fabrics, their History and Applications*, (London, 1882), p. 364.

³⁰Phillip Pulsiano et al. (eds), Medieval Scandinavia: an Encyclopaedia, (New York, 1993), pp. 96–100; Kirsten Wolf, Daily Life of the Vikings, (Westport, CT, 2004), p.39. I am grateful to Gareth Williams for his helpful comments on wadmal

Certain aspects of *wadmal* parallel what we have seen in our study of textiles as money on the Silk Road. *Wadmal* functioned both as a textile and as a money object. It was created by women in the home, in sufficient quantities that it could be an export item. It was woven to specific dimensions and weights, and the values related to standard lengths of 56 cm. Furthermore, it functioned as a measure of value alongside silver coins, apparently proving more stable in value than the coins. The equivalent of a law ounce (6 *ells*, or 3.36 m) was a substantial length of fabric.³¹

The subject of textiles as money in Africa is more complex. Textiles functioned as money both intra-regionally and inter-regionally and were transported over very long distances. As with the Silk Road, it was not necessarily the case that one carrier transported textiles the full length of the continent. James A. Webb's work on West African money also offers useful comparative material.³² He writes that in the Atlantic sector of Mauritanian trade, French merchants at Saint-Louis du Sénégal supplied cloth from India to the edge of the Mauritanian desert, from where it was carried north into the desert, and became one of the western Saharan money objects, along with gold and salt. Long-distance desert traders exchanged goods with intermediaries in return for Saharan money objects, or other trade goods, or on terms of deferred payment. However, more local exchanges of staple goods were paid for either with money objects or with 'customary equivalents'. The money objects were cloth or salt, which Webb notes were standardised, could be stored and were in wide demand. The 'customary equivalents' might include grain traded against livestock, without conversion through money objects, and with deferred payment as necessary. Webb's description appears to be a clear example of barter co-existing with a monetised system.

These are just two examples of textiles being used as money in a systematic and structured way over long distances that offer parallels to textiles as money on the Silk Road. There are countless other examples in the ancient, medieval and modern worlds.

Conclusion

The articles in this special issue show that there is ample historical and archaeological evidence not only to confirm that textiles were an important form of money in Tang dynasty China, and on the Silk Road during this period, but to show why and how they functioned as money. To sum up, the state inherited a system in which textiles were a money object, and maintained that system, collecting taxes in coin and in kind. The system of tax collection in textiles reached across the Tang empire as far as Khotan. According to this system, textiles were woven locally to specific dimensions and criteria, and were quality checked and recorded on receipt. One tax-textile might represent the payment of one or more taxpayer. The tax-textiles were stamped and tracked as they moved through the state treasuries and were eventually paid out for military expenses, salaries and other state expenditure. In this way textiles began to circulate, and Tang law stipulated that textiles and coins were to be used concurrently as money. Once textiles were in circulation they could be used either as money objects or as material from which to make clothes and other items. The system was extensive and efficient. The advantages and disadvantages of textiles as money were discussed

³¹We do not know if there were subsidiary measures, such as a half-ell or a quarter-ell.

³²James L. A. Webb, "Toward the Comparative Study of Money", pp. 458–459.

and debated at the highest level. Above all, textile money was seen as suiting the needs of both the issuer (the government) and the taxpayers (the producers). The textiles themselves were multifunctional – so the end user could use them as money or as textiles – and were desirable both within the Tang empire and further afield.

The demise of textiles in the economy coincided with the rise of silver across the world. This volume shows that textiles as money on the Silk Road, and by extension in other societies, merit more attention, and that the societies and systems in which they function(ed) are generally far more sophisticated than the pejorative term "primitive money" suggests.

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