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Justinian and the International Silk Trade

by Heleanor B. Feltham

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Figure 1. The Emperor Justinian and his attendants, mosaic, Ravenna 547 CE.¹

In this study I will be looking at three aspects of the international silk trade as it affected Justinian's Byzantium in the mid-sixth century: the introduction of sericulture, the availability of draw-loom technology, and Procopius' allegation that Justinian bankrupted the Syrian silk merchants by a policy of price-cutting at a time when the Persians had raised the price of silk. I will argue that the conventional image promoted by scholars such as Anna Muthesius of a dominant China as the primary source of both sericulture and silk-weaving, and Byzantium as a passive recipient of trade and technology is far from accurate and that, among other factors,

¹ <http://dl.coastline.edu/classes/internet/art100/imageindex.htm>

including an unusual socio-political situation in Central Asia, the role of the Sogdians (figure 2) in the silk trade was highly significant.

In the mid-sixth century the Byzantine historian Procopius included in his history of Justinian's wars a single paragraph on the introduction of sericulture to Byzantium. Quoted, misquoted, and used as the basis for elegant historical fantasies on early industrial espionage or the relationship between Byzantium and China, this remains one of the few pieces of evidence we have for the introduction not simply of silk or weaving, but of sericulture to the West. However, Procopius' story, and that of the later historian Theophanes, needs to be considered not simply within the Byzantine context, but within the complex and shifting cultural and political world of international trade and relations in the mid-sixth century, a world in which both raw and woven silk played a major role as virtual currency, symbol of status, and arbiter of style, involving cultures as divergent as the Persians, Byzantines and Chinese, the Indian kingdoms (trading by both land and sea), Turkic nomads, and the Sogdian merchants of Central Asia.



Figure 2. Afrasiab (Samarkand) C7th. fresco, Sogdian ambassadors in Persian-style silk caftans with senmurvs, pearl rondels and confronted animals.²

² Jonathan Tucker, *The Silk Road Art and History* (London: Philip Wilson Publishers, 2003)

Writing in the mid- sixth century, when Justinian had been on the throne for almost twenty-five years, Procopius tells us:

About the same time there came from India certain monks; and when they had satisfied Justinian Augustus that the Romans no longer should buy silk from the Persians, they promised the emperor in an interview that they would provide the materials for making silk so that never should the Romans seek business of this kind from their enemy the Persians, or from any other people whatsoever. They said that they were formerly in Serinda, which they call the region frequented by the people of the Indies, and there they learned perfectly the art of making silk. Moreover, to the emperor who plied them with many questions as to whether he might have the secret, the monks replied that certain worms were manufacturers of silk, nature itself forcing them to keep always at work; the worms could certainly not be brought here alive, but they could be grown easily and without difficulty; the eggs of single hatchings are innumerable; as soon as they are laid men cover them with dung and keep them warm for as long as it is necessary so that they produce insects. When they had announced these tidings, led on by liberal promises to the emperor to prove the fact, they returned to India. When they had brought the eggs to Byzantium, the method having been learned, as I have said, they changed them by metamorphosis into worms which feed on the leaves of mulberry. Thus began the art of making silk from that time on in the Roman Empire.³

³ Procopius, *On the Wars*, Internet Medieval Sourcebook, *Procopius: the Roman Silk Industry c. 550*. Available at: <http://www.fordham.edu/halsall/source/550byzsilk.html>. Accessed 2006 June 30



Figure 3. Fragment of a Coptic tunic C6th-7th CE.⁴

⁴ Ludmilla Kybalova, *Coptic Textiles* (London: Paul Hamlyn, 1967)

When Justinian first became emperor of Byzantium in 527, the traditional Roman woollen toga had long gone out of fashion, though it was still occasionally shown in frescoes of early saints, and was the designated official costume of one unfortunate government official. The toga had been replaced by the far more practical Greek-style tunic and cloak or, in imperial circles, by the largely ungendered *loros*⁵ often seen in mosaics, but in fact restricted to ceremonial occasions.

Roman women, who wore the rather more practical stola, had been wearing silk versions for several centuries. Byzantine men were now increasingly likely to wear either tunics and cloaks incorporating the decorative woven wool and linen rondels and bands designed and produced in Coptic Egypt and widely exported both eastward and westward (figure 3), or imported silks, which reached Byzantium through the Persian Empire. At each stage of silk's long journey from China, whether by land or sea, dyes and woven designs added value and increased its cost. Perhaps the most common sequence was from Chinese horse-buyer to steppes nomad to Sogdian merchant to Persian official to Persian or Syrian atelier, to Byzantine *kommerkiarios* (government trade officials): a pattern of exchange followed whether the silk travelled by land or sea. In the West, silks, especially those dyed with murex purples, were subject to strict sumptuary laws, and the highest quality was reserved for the imperial family.⁶

For Byzantium, in an endemically uneasy relationship with the Persian Empire with whom it shared several borders, the silk trade brokered through that empire was a constantly fraught issue, subject to strict government regulation on both sides (figure 4), and also subject to unexpected and unwelcome changes in costs and availability. The problem was not at the production end: Syria and Egypt, both centres of textile industry and trade, remained within the Byzantine world until the early seventh century, and here the manufacture of silk was already well established. Syrian weavers were sufficiently skilled that their fabrics could be found

⁵ Jennifer L. Ball, *Byzantine Dress: Representation of Secular Dress in Eighth- to Twelfth-Century Painting* (New York: Palgrave Macmillan, 2006).

⁶ Nicolas Oikonomides, *Silk Trade and Production in Byzantium from the Sixth to the Ninth Century: The Seals of Kommerkiarioi*, *Dumbarton Oaks Papers*, 1986, vol. 40, pp. 35–53. Available at: <http://www.jstor.org/> Accessed July 5, 2006.

eastward as far as Japan,⁷ while Coptic linen/woollen textiles were also widely traded, and it was here that the spectacular and very valuable murex dyes were produced.⁸ Sericulture was a different matter. Like Australian merino wool, which is exported 'raw' to be value-added into textiles in countries such as France and Italy, silk yarns and smothered cocoons were widely traded commodities, and much if not all originated in China.



Figure 4. Seals of the *kommerkiarios*⁹

China would remain the principal source of the finest silks until well into the eighteenth century, despite the gradual spread of silk production and weaving from east to west. Sericulture is a highly skilled and a highly labour-intensive operation. Within the Chinese culture, from a very early period, most households were involved to some degree in raising mulberries and silkworms and producing yarn and woven goods. Reeling and spinning silk were considered household duties for women at every social level (figure 5), and in silk-producing districts a large part of each day was devoted to the feeding and care of silkworms and the unravelling, spinning, weaving, dyeing, and embroidering of silk.¹⁰

⁷ Ryoichi Hayashi, *The Silk Road and the Shoso-in*, Heibonsha Survey of Japanese Art, vol 6 (New York, Tokyo: Weatherhill/Heibonsha, 1975)

⁸ Luce Boulnois, *The Silk Road* (London: George Allen & Unwin, 1966)

⁹ <http://www.ancienttouch.com/byzantine%20lead%20seals.htm>

¹⁰ Susan Mann, *Precious Records: Women in China's Long Eighteenth Century* (Stanford, Calif.: Stanford University Press, 1996). In her chapter on *Work* (pp. 143 ff.) Mann outlines the importance of sericulture in the lives

While there are several species of silk-producing moths found in a number of countries, the long history of sericulture in China focussed on the slow development of a particular type of moth, *Bombyx mori*. Blind and flightless, it can exist only with human intervention, and will eat only the white mulberry, which was also unique to China. As well, the process of rearing the delicate worms, which must be kept at a fixed temperature, fed regularly and moved into new trays as they grow, the need to care for the mulberry trees, the specialised cocoon boxes — all the infrastructure of silk production — required specialised knowledge, technology, and skills.



Figure 5. China, East Han (25–220 CE) tomb relief of household weaving.
Jiangsu Province¹¹

of both elite and peasant Chinese women, tracing its historical significance back to the fourth century BC and the often-cited story of Mencius’ mother.

¹¹ <http://history.cultural-china.com/chinaWH>

By the Zhou dynasty (1122–221 BC) sericulture in China was established wherever the white mulberry could be grown; silk had become a highly valued commodity, functioning much like coinage: taxes were paid in lengths of woven cloth; representatives of foreign powers were presented with gifts of silk; nomads exchanged horses for it; dowries included it; civil servants and military officers received it as part of their salary; and trade was stimulated by it, especially on the frontiers where soldiers were often paid in silk rather than cash (silk was much easier to transport), encouraging trade across the borders especially at the annual fairs and horse markets of the Great Wall's border towns.¹²

Long before the Silk Road was officially 'opened' by the Emperor Wu Di ca. 139 BC, silk was finding its way east and west of China.¹³ The oldest known example of silk outside China comes from the hair of a Twenty-first Dynasty (around 1000 BC) female mummy from the workers' cemetery of Dar el Medina,¹⁴ though it does not appear to be used for garments prior to the Ptolemaic period (post-300 BC). Silk has also been found in the Scythian nomad tombs at Pazyryk in the Altai, dating from the fifth to the third centuries BC and even in Celtic tombs of the La Tene culture¹⁵ in sites as far apart as Scotland and Germany, where silk threads were used in embroidering the clothes of the aristocracy. It is also likely that raw silk, reaching Greece by way of the Black Sea and its Scythians, was woven into textiles at Cos,¹⁶ though the relatively accurate description of silkworms and cocoons found in Aristotle's natural history was long forgotten by the first century AD, and the Romans largely believed that silk grew on trees. All of this indicates the breadth of trade connections from China to the West in the pre-Han period, and the value placed on silk. Much of this trade would have passed through Achaemenid Persia, and,

¹² Heleanor Feltham, *Sasanian Silk and Silver*, Sydney, UNSW Summer School Silk Road resources, 2005

¹³ Irene Good, 'On the Question of Silk in Pre-Han Eurasia', *Antiquity*, vol. 69 (1995), no. 266

¹⁴ G. Lubec, J. Hlaubek, et al., 'Use of Silk in Ancient Egypt', *Nature*, March 4, 1993

¹⁵ *Archaeology in Edinburgh, Annual Report 2003* Available at:
<http://www.arcl.ed.ac.uk/arch/annrept/report2000/research.htm> Accessed 02/02/2004

¹⁶ James Yates, 'Sericum', in William Smith, *A Dictionary of Greek and Roman Antiquities* (London: John Murray, 1875), pp. 1028–1029

while there is no direct archaeological evidence of silk textiles of the period (the earliest is a green silk cord from the Parthian period),¹⁷ the evidence of the Pazyryk tombs in the Altai shows that both Persian woollen textiles and Chinese silks (figure 6) were available to the Scythians on the empire's borders¹⁸ and may have been available in the Achaemenid court.



Figure 6. Chinese embroidered silk from Pazyryk c. 400 BCE¹⁹

¹⁷ Philippa Scott, *The Book of Silk* (London: Thames & Hudson, 1993), p. 51

¹⁸ Sergei I. Rudenko, *Frozen Tombs of Siberia: The Pazyryk Burials of Iron-Age Horsemen* (Berkeley: University of California Press, 1970). Among the textiles found in Pazyryk is a fifth-century woollen saddlecloth remarkably similar in design to the robes worn by the Immortals of the Susa brick frescoes (barrow 5) and, from the same tomb, a length of embroidered Chinese silk.

¹⁹ *Op. cit.*

Apart from its use as an indicator of status for military outfits and banners, a use to which the Byzantines put their silks from a very early period,²⁰ silk has an entirely practical application, particularly for military groups confronting mounted bowmen. Finely-woven loose silks worn under armour will often, without tearing, penetrate a wound along with the arrow-head, making it slightly easier to extricate the arrow, and helping to prevent contamination of the wound by micro-organisms or poisons (contaminated arrow-heads were a military commonplace).²¹

Much of this silk was transmitted through the various groups of Central Asian pastoral nomads, such as the Xiongnu on the borders of China, who received bales of silk for their horses, furs, and portable luxuries, traded at the gates of the Great Wall. This then passed through tribal confederations and interlocking trading groups to the Sakas in Central Asia and the Scythians around the Black Sea and the Ukraine. Silk became one of the significant means whereby leaders of large tribal confederacies maintained the support of other clans through gifts of luxury goods, just as the leaders maintained loyalty within their own tribes.²² It was also a means for the nomads to acquire a range of other desirable and sometimes essential commodities, from wooden tent and chariot elements, to gold bow-cases, to grain.

Organised trade, however, would have been impossible without the skills, enterprise and entrepreneurial know-how of the peoples of the Central Asian oases, the Sogdians, Tocharians and Bactrians. The Sogdians, who lived largely in the regions that are now Uzbekistan and Tadjikistan, had developed a culture based on intensive irrigation agriculture, as had the Bactrians, whose country included areas of Northern Iran and Afghanistan, and the Tocharians, who farmed the smaller and less well-watered oases around the Taklamakan Desert in modern Xinjiang. Han and Jin dynasty silks of rich and complex design have been found in Central Asian

²⁰ Anna Muthesius, *Byzantine Silk Weaving AD 400 to AD 1200* (Vienna: Verlag Fassbaender, 1997)

²¹ Adrienne Mayor, *Greek Fire: Poison Arrows & Scorpion Bombs: Biological and Chemical Warfare in the Ancient World* (New York, London: Overlook Duckworth Woodstock, 2003)

²² David Christian, *A History of Russia, Central Asia and Mongolia* (Oxford: Blackwell, 1998), Ch. 8, pp. 183 ff

graves, especially those of the arid Xinjiang region, as have fine-woven plain silk undergarments such as those of the Yingpan Mummy discovered in the 1990s.²³

Sogdians and Bactrians were, in theory, subjects of the Iranian empire from the sixth century BC on, and they were influenced by both Iranian and Hellenic Greek culture; in reality they gave lip-service acknowledgement to whichever military power, nomad or settled, happened to be dominant at the time, and continued to make a highly successful living as agriculturalists and merchants, marketing their skills as translators and administrators to whatever group was in power. Their furthestmost cities were on the edges of the Tarim Basin, though the oases of this difficult and largely desert region were mainly farmed by the Tokharians, a linguistically distinct group of Indo-Iranian people, and after the ninth century AD, by the Turkic Uighurs. However, by the beginning of the fourth century AD, there is evidence of a networking of Sogdian trading communities operating from the Persian Empire to the Chinese capital.²⁴



Figure 7. The Silk Road²⁵

²³Etsuko Kageyama, 'Use and Production of Silks in Sogdiana', *Transoxiana, Journal of Oriental Studies*. Available at: <http://www.transoxiana.com.ar/Eran/Articles/kageyama.html> Accessed 16.02.04

²⁴ Étienne de la Vaissière (Trans., James Ward), 'Sogdian Traders, a History', in *Handbook of Oriental Studies*, Section 8: Central Asia, vol. 10, *Sogdian Traders* (Leiden, Boston: Brill, 2005)

²⁵ http://en.wikipedia.org/wiki/Silk_Road

Not only did the silks travel around the oasis cities of the Tarim Basin and along the trade networks to the Persian Empire (figure 7), the means of sericulture also escaped the Chinese attempts to maintain this highly profitable trade secret. Not surprisingly, given the extreme importance of silk to trade, the Chinese attempted to control knowledge of sericulture by imposing the death penalty on anyone who transmitted such knowledge outside China. While the art had reached Korea at a surprisingly early period, around 200 BC with waves of Chinese migrants, it would not be until the fourth century AD that sericulture went west, establishing itself in North India shortly after 300 AD, where new silk technology and Chinese silkworms, introduced by travelling Buddhist monks, could build on an existing tradition of using wild silk. (India was actually exporting such textiles to Alexandria during the Kushan period).



Figure 8. Dandan-Oilik C6th CE. The Chinese princess who smuggled silk cocoons in her marriage crown²⁶

During the years following the fall of the Han dynasty in the early third century Northern China was under the rule of various nomad dynasties such as the Toba, and control of the Silk Road oases had passed out of Chinese hands. Perhaps for this reason it became easier to export sericulture, especially through political marriages such as that between the ruler of Khotan in AD 440 and his Chinese princess (figure 8), who, as a wedding gift, smuggled silkworm eggs in her elaborate headdress (though it is probable that the secret was already out).²⁷ The Khotanese maintained an embargo themselves, but by the sixth century the art of sericulture had travelled

²⁶ British Museum collection

http://www.britishmuseum.org/explore/highlights/highlight_objects/asia/t/the_story_of_the_silk_princess.aspx

²⁷ Jonathan Tucker, *The Silk Road Art and History* (London: Philip Wilson Publishers, 2003)

westward. The Sogdians, the Tocharians, and the Bactrians had, by this period, developed their own silk & silver industries, producing textiles (figure 9) and silverware in the international Sasanian style that was widely distributed across Central Asia and even into China. Kusha, Kashgar, and Samarkand are mentioned as sources of brocades and other silk textiles in both the *Wei Shu* and the *Sui Shu* (official histories of fifth- to seventh-century China). However while white mulberries were cultivated and silkworms reared, the limitations of the oasis cities meant that sericulture was a relatively minor activity, and the bulk of both raw silk and silk textiles continued to come from China.



Figure 9. Sogdian silk child's jacket with confronted peacocks in Persian pearl rondels, C6th–7th CE²⁸

From a very early period, the Sogdians, Bactrians, and Tocharians had developed literate, tolerant, urban cultures that survived in a usually friendly ecological balance with their nomad neighbours, each group providing different essential elements for both everyday life and trade. Archaeological exploration of major cities such as Afrasib (Samarkand) and Chash (Tashkent)

²⁸ Philippa Scott, *The Book of Silk* (London: Thames & Hudson), 1993

show houses much like those still found in some Central Asia regions today, houses built of lavishly decorated mud brick with individual living quarters²⁹ and one or more large reception halls or courtyards. Carved wooden pillars, decorative stucco, and large murals are found in dwellings from Miran in Xinjiang to Varakhsha near Bukhara. The murals especially, with their gorgeously dressed men and women (figure 2), give us an insight not only into the pre-Islamic culture of the region, but also into the use of textiles, not only as costume, but also as caparisons for horses and camels, and as canopies and even sunshades.³⁰

The art of sericulture seems to have reached the Sogdians at a time when they no longer formed a part of the Sasanian Persian Empire. A nomad culture, believed to be related to a branch of the Xiongnu, the Ephthalite or White Huns, had established a hegemony in North India, Bactria, and Sogdiana and by the late fifth century had become sufficiently powerful to confront the Persian armies, defeating and killing the Emperor Peroz in 484. Perhaps for this reason the art of sericulture does not seem to have been established in Persia, although the Persian royal ateliers were the primary source of complex and elaborate silk textiles characterised by repeating patterns, often of heraldic-style animals, birds or monsters (figure 10), or kingly figures hunting on horseback. Cocks, bulls, paired lions, winged horses, griffons, the 'tree of life', scenes of human and animal combat, kingly lion hunts — each scene arranged with heraldic neatness and contained within a jewel-like rondel of pearls and four squares, the whole design endlessly repeated over a woven field with rondels interspersed with floral motifs. The same designs were woven up from imported Chinese silk thread, or from local products, and are also found in Coptic linen-woollens³¹ and silk *samit* variations such as those in the Metropolitan Museum in New York and the Victoria and Albert Museum in London. These designs were so popular, and so important as international markers of status that the images became incorporated into the stylistic life of widely divergent communities, taking on local meanings within the contexts of

²⁹ G. L. Semenov, 'Dwelling Houses of Bukhara in the Early Middle Ages,' *Transoxiana: Journal of Oriental Studies* Available at: <http://www.transoxiana.com.ar/Eran/Articles/semenov.html> Accessed 16.02.04

³⁰ For a comprehensive survey of Silk Road city murals, see the illustrations in Jonathan Tucker, *The Silk Road Art and History* (London: Philip Wilson Publishers, 2003).

³¹ Ludmilla Kybalova, *Coptic Textiles* (London: Paul Hamlyn, 1967)

social and military power and religious symbolism. In the Byzantine Near East they seem largely to have replaced the slightly earlier Hellenistic motifs.

While it is probable that these textiles were woven using a draw loom, anyone who is aware of tribal weaving traditions, be they Cambodian double-ikats or Turkman carpets, will recognize that elaborate repeating patterns of great subtlety and complexity can be achieved with remarkably simple, even 'primitive' looms; ones that can be set up outside a nomad yurt or on the verandah of an Iban long-house. In any event the Persians had been creating complex woollen textiles, such as the frieze of lions found at Pazyryk, since at least the sixth century BC. Early Chinese silks are even more complex, but images such as that found on a Chinese tomb fresco of the Han dynasty (202 BC–221 AD) show weaving on a relatively simple upright loom (figure 5), very different from the two-person draw looms of the Song dynasty (918–1279 AD) often cited as a source of Byzantine technology.

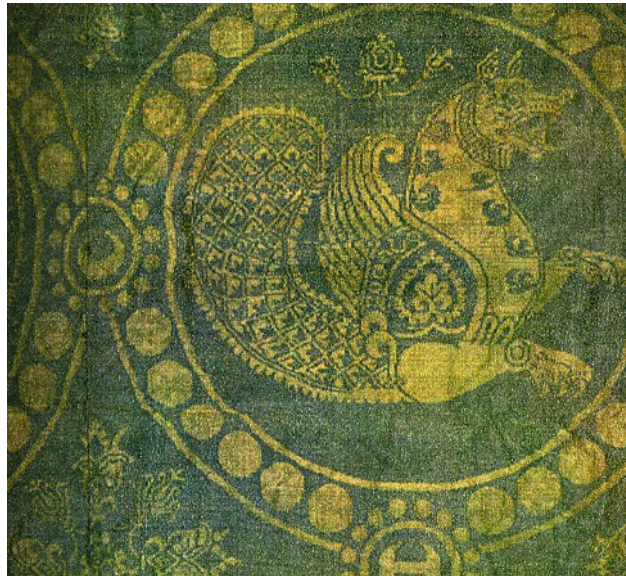


Figure 10. Sasanian Persian woven silk with senmurvs in rondels C6th–7th.
Used in the reliquary of St Leu Paris³²

Even as early as the age of Justinian, these Sasanian designs, which were also found on Persian imperial workshop silverware, had become internationally popular and were widely traded and copied. And, by the eighth century, whether woven in Byzantium, Spain, Syria, Persia,

³² Victoria and Albert Museum collection

Sogdiana, Xinjiang, China, or even Japan, the styles and motifs of the most highly valued silks show remarkable similarities. The Sasanian lion hunt was particularly popular, and examples include silks from Astana in Xinjiang, an eighth-century Japanese-woven example from the Shoso-in, and a Byzantine version found in the Vatican (figure 18).

Despite the constant warfare between the Sasanian Persian Empire and the Byzantine world, trade between the Far East and the West continued to flourish. Pepper and other spices were still imported from Southeast Asia via India, along with cool cottons; and silks still arrived in Persia by both land and sea to be exported to Byzantium mainly through Syria.³³ Sometimes trade goods destined for Western markets travelled through Iran, doubling in price as they did, sometimes they moved around the steppes region, via such middlemen as the Khazars and the Bulgars, reaching Byzantium via the Black Sea. The style of the textiles almost always followed that of the Sasanian Persians, but raw silk and stifled cocoons were also widely traded. The Byzantine government exerted a tight and complex control over the silk trade, both as imported goods and, after the sixth century, with locally woven products.³⁴ Every transaction between Byzantine and foreign merchants occurred through a small group of government officials, the *kommerkiarioi*, who from the fourth century were stationed in frontier market towns and were the only people authorised to buy silk from foreign traders.³⁵

However, while many Byzantine scholars such as Muthesius, Oikonomedes and Maniatis assume that sericulture and its concomitant weaving techniques reached Byzantium directly from China, the political and economic realities of the mid-sixth century make this a relatively unlikely scenario. Procopius references Serindia (Central Asia) rather than China as the source of the first Byzantine silkworms, while Theophanes, writing some two and a half centuries later, claims the secret was brought by a Persian who had travelled from 'the land of the Seres' (China). Just who were Procopius' monks? He claims they came 'from India' but had travelled in Central

³³ The Silk Road Foundation, 'History of Silk'. Available at: <http://www.silk-road.com/toc/index.html>
Accessed 2004 August 24

³⁴ Oikonomides, *op. cit.*

³⁵ *Ibid.*

Asia (Serindia). Theophanes, writing at the beginning of the ninth century, gives a slightly different account of the same sixth-century events:

A certain Persian [he tells us] exhibited in Byzantium the mode in which (silk) worms are hatched, a thing which the Romans had never known before. This Persian on coming away from the country of the Seres had taken with him the eggs of these worms (concealed) in a walking-stick, and succeeded in bringing them safely to Byzantium. In the beginning of spring he put out the eggs upon the mulberry leaves which form their food; and the worms feeding upon those leaves developed into winged insects and performed their other operations. Afterwards, when the Emperor Justinian showed the Turks the manner in which the worms were hatched, and the silk which they produced, he astonished them greatly. For at that time the Turks were in possession of the marts and ports frequented by the Seres, which had been formerly in the possession of the Persians. For when Epthalanus King of the Ephthalites (from whom indeed the race derived that name) conquered Perozes and the Persians, these latter were deprived of those places, and the Ephthalites became possessed of them. But somewhat later the Turks again conquered the Ephthalites and took the places from them in turn.³⁶

In this version there are no monks, and no connection with India — and no particular reason why a 'Persian' would have information on sericulture — but there is a good working knowledge of Central Asian politics. However, it is worth remembering that until the late fifth century Sogdiana was a satrapy of the Sasanian empire, and 'Persians' or 'Monks from India', the carriers of the silkworms may well have travelled through Sogdiana to reach Byzantium.

³⁶ Quoted in Sir Henry Yule, *Cathay and the Way Thither* (London: Hakluyt Society, 1866), *Digital Silk Roads Archive of Toyo Bunko Rare Books*, available at: <http://dsr.nii.ac.jp/toyobunko/III-2-F-b-2/index.html.en>. Accessed 2006 July 8



Figure 11. Bezeklik fresco, Xinjiang, C8th–9th. Nestorians celebrate Palm Sunday.³⁷

One possibility is that they were Nestorian Sogdians (figure 11). Nestorians were a schismatic Christian sect, originally centred in Syria, whose principal theologian, Nestorius, was expelled from Byzantium following the Council of Ephesus in 431. Many Nestorians settled in the generally more tolerant Persian Empire where they were initially protected by the Sasanian shah who helped install a Nestorian bishop at Nisibis in 484. Travelling along the Silk Roads, they made many converts principally among the lower ranks of the Sogdians.³⁸ By the beginning

³⁷ Museum für Indische Kunst Dahlem Berlin

³⁸ Frantz Grenet, 'Religious Diversity among Sogdian Merchants in China (6th Century AD): Zoroastrianism, Buddhism, Manichaeism, Hinduism,' conference paper, 2005, unpublished

of the seventh century Samarkand had become a Nestorian Metropolitan See, and Nestorian churches were to be found as far afield as Xi'an and Nara.³⁹ Sogdian communities on the Black Sea are also mentioned among the peoples converted in the Crimean region in the fifth-century lists attributed to Epiphanius of Cyprus.⁴⁰ Nestorians, whatever their origins were actively involved in international trade both by land and sea. Much of our understanding of the sea routes coming to Persia via Ceylon, for instance, derives from Cosmas Indicopleustes, an Alexandrian spice merchant who had retired to a Nestorian monastery in the Sinai to write *Christian Topography* (547 to 550), one of the few sources of information on the international sea trade.⁴¹ (It should be remembered, however, that the Sogdians were increasingly in competition with other great mercantile communities, including the Persians themselves, who were directly involved in both the land and the sea trades, as well as acting as both primary producers and middlemen, with the Sri Lankans who brokered Indian textiles, especially cottons, Chinese silks, and southeast Asian spices, as well as with the increasingly wealthy maritime kingdom of Srivijaya in Sumatra.⁴² The 'monks' could certainly have reached Byzantium by the sea route, from the Coromandel or Malabar coasts of India, though Procopius quite specifically refers to their having been in Central Asia.)

Monks and merchants were closely aligned. Most of the religions — Buddhism, Nestorianism, Manichaeism and Hinduism — that followed the trade routes across Asia did so in company with the caravans. Among the Nestorians, the Syriac word for merchant was used metaphorically for those spreading the gospel, and a fourth century hymn includes the following stanza:

Travel well-girt like merchants
That we may gain the world,

³⁹ Richard C. Foltz, *Religions of the Silk Road: Overland Trade and Cultural Exchange from Antiquity to the Fifteenth Century* (New York: St Martin's Griffin, 1999)

⁴⁰ De la Vassière op. cit.

⁴¹ Ibid.

⁴² John Keay, *The Spice Route: A History* (London: John Murray, 2005), pp. 84 ff.

Convert men to me,
Fill creation with teaching.⁴³

But if our 'monks' were Sogdian, why should they want to undermine their trading options by revealing the secret of sericulture? Does this fit in with their usual practice? To some extent it does. Sogdians regularly established expatriate communities in countries where they wished to trade, and their countries cemented alliances with valuable gifts to the rulers. Sogdians were also willing to reveal industrial secrets to further their careers. The Sogdian merchant and weaver, He Tuo, arrived in Nanking at much the same time as our monks reached Justinian's court. His skill in weaving gold thread brocades and his estimable financial acumen helped him amass a considerable fortune, allowing him to launch his younger son on a career in the Chinese bureaucracy. His nephew, He Chou, was sent to Chang An, where he obtained a post in the court ateliers, eventually becoming head of the imperial wardrobe, due to his ability to teach the imperial weavers to produce 'fabrics adorned with medallions surrounded by pearls, which constitute the usual tribute of the Persian Empire.'⁴⁴



Figure 12. China, Tang, 618–906, fragment of silk samite with confronted deer⁴⁵

⁴³ Foltz, op.cit., p. 62

⁴⁴ De la Vassière, citing He Chou's biography in the *Suishu* (Dynastic History of the Sui Dynasty)

⁴⁵ 'Living in Silk: Chinese textiles through 5000 years',

The introduction of these new weaving techniques was so successful that both historical and archaeological records show complex, Sasanian-style textiles, produced in the Sui dynasty court ateliers and utilising such traditional imagery as the Persian king hunting lions or the deer and tree of life motif (figure 12), were being presented to ambassadors from both Japan and Astana.⁴⁶

So Sogdian merchants might well have wished to ingratiate themselves with a new potential market by exchanging valued trade secrets, especially as the limitations of oasis cultures did not allow for large-scale sericulture in Samarkand or Tashkent. But could Justinian justify sending the monks back to collect eggs and information as Procopius claims? In 529 he had entered into a trade agreement with the Persians, which stated

Merchants subject to our government, as well as those [subject] to the king of the Persians, must not hold markets beyond the places agreed upon at the time of the treaty concluded with the above-mentioned nation, in order to prevent the secrets of either kingdom from being disclosed (which is improper). Therefore no subject of our empire shall hereafter presume to travel for the purpose of buying or selling merchandise beyond Nisibis, Callinicum and Artaxata, nor think that he can exchange merchandise with a Persian anywhere beyond the above-mentioned cities... (Codex Justinianus (529), IV, 3.4)⁴⁷

If the 'monks' were from the Persian Empire, their activities were in direct contravention of this agreement; however, in the early sixth century the Sogdians were part of the Hephthalite oecumene, along with the Bactrians whose brilliant Kushan culture, a major force in earlier trade and manufacture, was largely destroyed during the invasions. During the sixth century, however,

http://ebwg.sunbo.net/show_hdr.php?xname=OVRD401&dname=

⁴⁶ Ryoichi Hayashi, op. cit. In the late 1970s, a Japanese master-weaver researched the history of the Chinese Shoso-in textile with a view to recreating the design using a traditional one-person upright loom.

⁴⁷ Cited in Khodadad Rezakhani, *Between the Hammer and the Anvil: Mesopotamia and Syria between the Two Late Antique powers, 502–562 CE* (2006). Available at: <http://www.vishistorica.com/byz06-revised.doc>.

Accessed 2006 July 4

a new steppes power, the Turks, were establishing themselves from the borders of China to the Black Sea (figure 13), and by the third quarter of the sixth century an alliance between the Emperor Khosrow I (531–579) and Istemi, the Khagan of the Western Turks (553–576), had succeeded in destroying the Hephthalites; the Sassanids took Bactria, and the Turks officially gained control of Sogdiana.⁴⁸ If the ‘monks’ were indeed Sogdians, they could exchange whatever trade secrets they chose with Justinian. Similarly, the Sogdians, now being charged additional border taxes to ship their goods to the Persian Empire, and occasionally in direct competition with Persian merchants, would have no reason to maintain secrecy.⁴⁹ They may also have realised that establishing a successful silk industry would take a great deal more than a hollow staff full of silkworm eggs.



Figure 13. The Gokturk khaganate after the split of c. 584⁵⁰

And if the Sogdians hoped to establish themselves in Byzantium as they had in so many other cultures, they would have been sadly disappointed. Byzantine mercantile culture was

⁴⁸ Svatopluk Soucek, *A History of Inner Asia* (Cambridge: Cambridge University Press, 2000)

⁴⁹ De la Vassière, *op.cit.*

⁵⁰ <http://en.wikipedia.org/wiki/File:Gokturkut.png>

rigidly government-regulated and rules forbade dealings with non-Byzantine traders, including established Jewish merchants, especially where silk was concerned.

However, there was a good reason why the Sogdians might not want another centre of sericulture emerging in the mid-sixth century. Following the third-century fall of the Han dynasty, China was divided into three very unstable kingdoms, Wei, Shu, and Wu. By 280, all three had fallen, and the following three centuries saw China split into two regions, Northern and Southern, each ruled by relatively short-lived dynasties. In the north, invasion by Central Asian nomads — Southern Xiongnu, Tibetans, Proto-Turks, and others — meant that some half of the population and most of the ruling families were non-Chinese, while there was a massive exodus of refugees to the South.

The Great Wall had proved no barrier to the new waves of nomads. One branch of the Xiongnu founded its own Chinese state in 304, sacking the Chinese capital of Luoyang in 311. From then on, in the north formerly nomad rulers took on a Chinese life-style, even building their own 'long walls' to keep out other steppes people. Buddhism flourished, particularly in the great cave temple complex of Mogao at Dunhuang, which was founded in the fourth century, and nomad-origin rulers of North China even claimed a mandate from the Buddha.⁵¹

⁵¹ Chinaknowledge: A Universal Guide for Chinese Studies. Available at: <http://www.chinaknowledge.de/>
Accessed: 2005 July 20



Figure 14. Panel from the funerary couch of An Jia, a leading Sogdian merchant of Xi'an in China, Northern Zhou period 557–581⁵²

Trade with the West continued throughout this period, and the oasis cities of Xinjiang and Uzbekistan, nominally subject to the nomads, flourished. Throughout Xinjiang, painted Buddhist temple complexes were built, and both Chinese and Persian textiles were available (and are often found in the graves of the region). Travellers such as the Chinese Buddhist monk Faxian (travelled 399–414) reported back on the kingdoms of the Silk Road from the Great Wall to Gandhara. The key players in the Silk Road trade were the merchants of Sogdiana (figure 14), the region now known as Uzbekistan, who established trading networks from Samarkand to Xi'an and were often employed as translators and advisors. They were also dominant in the horse trade, bringing new stock from Ferghana and breeding and training horses in the Ordos region for sale to the Chinese.

In the 550s, a new and very important nomad power threatened the northern kingdoms.

⁵² site:www.chinaheritageneewsletter.org Sogdian burial

This was the first empire of the Turks (figure 17), who rapidly established a steppe kingdom ranging from the Great Wall to the Black Sea. The Turks turned to the Sogdian merchants for political and economic advice, especially on how to profit from the large quantities of silk that they were extorting from the vying Northern Kingdoms of China as 'tribute' intended to forestall incursions or a possible invasion. The Zhou kings, who replaced the Northern Wei in 557, and the Qi (550–577) each paid the Turks some 100,000 pieces of silk a year (this largesse would last until the establishment of the Sui dynasty in 581).⁵³ The Sogdians advised the Turks first to request that Sogdians be allowed to travel to Persia to sell their raw silk and then, when this failed, to send their silks to the Byzantine Empire, bypassing Persia and therefore avoiding border taxes.

⁵³ Ibid.

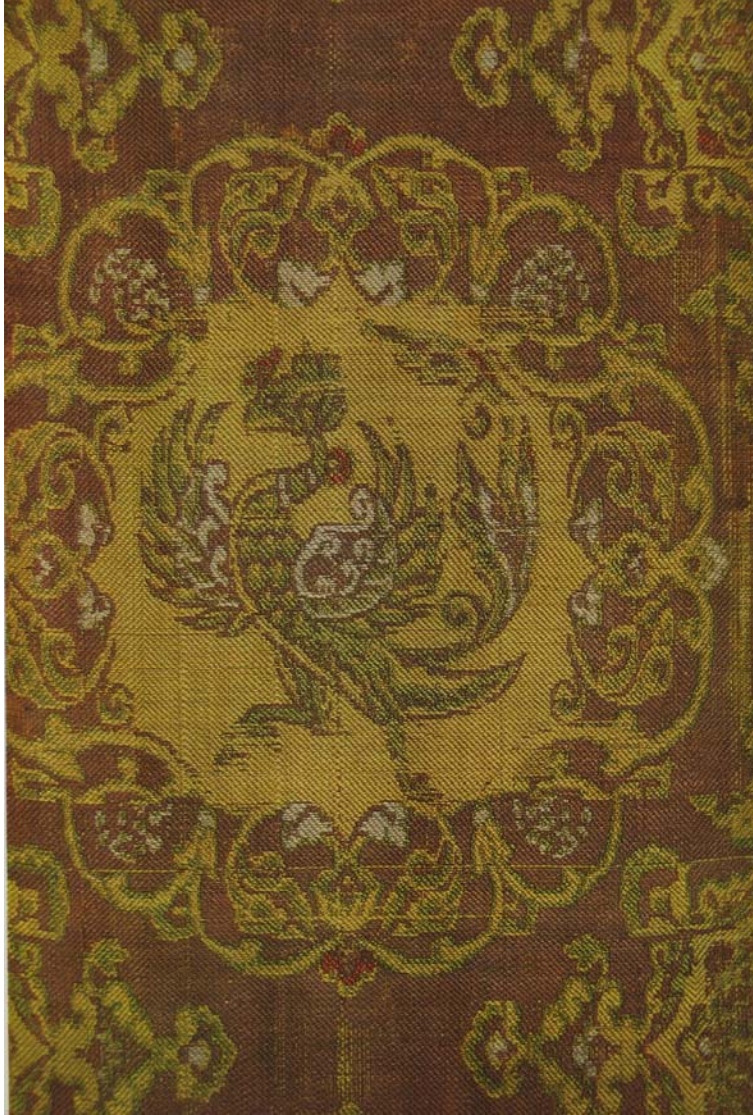


Figure 15. Chinese silk phoenix Tang dynasty, C7th, from the Shoso-in in Nara.⁵⁴

Were the Byzantines of Justinian's day already trading, legally or otherwise, with the Black Sea Sogdians? Certainly from 540, when Khosro I invaded Roman Mesopotamia and Syria and sacked Antioch, resettling much of the skilled population in Iran, the Syrian trade was severely disrupted, and the situation was not helped when, in response to a Byzantine embargo on the sale of copper, the Persians increased the tariffs on silk. Syria was also subject to natural disasters, a severe earthquake in the 540s and the plague pandemic of 542, all of which would

⁵⁴ Ryoichi Hayashi, *op. cit.*

have been quite enough to ruin the Syrian silk trade without the additional problem of a possible cheap source of silk coming in through the Black Sea region. (The Byzantine–Persian treaty of 562, reinforcing the importance of official trade cities and routes and discouraging smuggling, might indicate that an alternative source was operating.)



Figure 16. C7th Syrian silk of Sampson and the lion.⁵⁵

Procopius, however, blamed Justinian:

Cloaks of silk had long been made in Berytus and Tyre, in Phoenicia. Merchants who dwelt in these, and all the artisans and workers connected with the trade, had settled there in early times, and from these cities this trade had spread throughout the earth. But during the reign of Justinian, those in this business at Constantinople and in the other cities, raised the price of these garments: claiming that the price for such stuffs had been raised by the Persians, and that the import duties to Roman territory were also higher.

⁵⁵ Victoria and Albert Museum collection

The Emperor, pretending to be incensed at this, proclaimed by edict that such clothing could not be sold for more than eight gold coins a pound; and the punishment for disobeying this law was the confiscation of the transgressor's property. This seemed to everybody impossible and futile. For it was not practicable for the merchants who imported silk at a higher price, to sell it to their customers for less. Consequently they decided to stop dealing in it at all, and privately got rid of their present stock as best they could, selling it to such notables as took pleasure in throwing away their money for such finery, or thought they had to wear it...

The former dealers in silk in Constantinople and every other city, by sea and by land, were naturally heavily damaged. Almost the whole populace in the cities mentioned were suddenly made beggars. Artisans and mechanics were forced to struggle against famine, and many consequently left the country and fled to Persia. Only the imperial treasurer could transact this business, giving a share of the profits aforesaid to the Emperor, and himself taking most of them, fattening on the public calamity. And so much for that.⁵⁶

But this apparent economic paradox and the claim that Justinian and his treasurer profited from the situation makes excellent sense if in fact a secondary, cheaper source of raw silk was available from another source, a Turkic/Sogdian source that bypassed Persia and Syria altogether.

⁵⁶ Procopius, *Secret History* pp. 165 ff



Figure 17. Balbuls (Turkic stone figures) Kyrgyzstan⁵⁷

In the period immediately following Justinian's death in 565, the Sogdians persuaded the Turkic qaghan to send an embassy to Constantinople to form an alliance with the Byzantines and transfer the sale of the silk to them.

The offer was accepted by Justinian II, and in 568 Zemarchus the Cilician, General of the East, left Byzantium for Sogdiana. The embassy was under the guidance of Maniakh, chief of the people of Sogdiana, who had first, according to Menander Protector, suggested to Dizabul (Dizaboulos, the Bu Min Khan of the Turks, the Mokan of the Chinese), the Great Khan of the Turks, this Roman alliance and had himself come to Byzantium to negotiate the same. On reaching the Sogdian territories the travellers were offered iron for sale and solemnly exorcised; Zemarchus was made to 'pass through the fire' (i.e., between two fires),

⁵⁷ Photograph by H. Feltham

and strange ceremonies were performed over the baggage of the expedition, a bell being rung and a drum being beaten over it while flaming incense leaves were carried around it and incantations muttered in 'Scythian'. After these precautions the envoys proceeded to the camp of Dizabul (or rather of Dizabul's successor, Bu Min Khan having just died) in a hollow encompassed by the Golden Mountain (apparently in some locality of the Altai). They found the Khan surrounded by astonishing barbaric pomp — gilded thrones, golden peacocks, gold and silver plates, silver animals, hangings and clothing of figured silk. They accompanied him some way on his march against Persia, passing through Talas or Turkestan in the Sry Daria valley where Hsuang Tsang on his journey to India sixty years later met with another of Dizabul's successors. Zemarchus was present at a banquet in Talas where the Turkish Khagan and the Persian envoy exchanged abuse but the Byzantine does not seem to have witnessed actual fighting. Near the river Oekh (Sry Daria?) he was sent back to Constantinople with a Turkish embassy and with representatives of various tribes subject to the Turks. Halting by 'the vast, wide lagoon' (the Aral Sea?) Zemarchus sent off an express messenger, one George, to announce his return to the Emperor. George hurried on by the shortest route 'desert and waterless', apparently the steppes north of the Black Sea, while his superior, moving more slowly, marched twelve days by the sandy shores of 'the lagoon', crossed the Emba, Ural, Volga and Kuban (where 4000 Persians vainly lay in ambush to stop him), and, passing around the western end of the Caucasus, arrived safely at Trezibond and Constantinople.⁵⁸

A second embassy from Byzantium to the Turks in 575–576 returned some 106 Turks to their homeland while reinforcing the treaty. However, by 579 the relationship seems to have soured, and by 581 the silk largesse that made this trade relationship significant had vanished with the emergence of the Sui dynasty. The Black Sea route was, in any case, rarely a secure one.

⁵⁸ Charles Raymond Beazley (1868–1955). Encyclopaedia entry citing Menander Protector on the Byzantine general Zemarchus available at: <http://www.ermeland.de/zemarchus.htm>. Accessed 2006 July 10

Not only were there dispossessed tribes of pastoral nomads such as the Avars on the move in search of new territories, but there were also, as Menander notes, large contingents of Persians determined on ensuring that trade remained in their own hands. The relative peace between Persia and the West broke down early in the seventh century when Heraclius came to the throne. The Sasanians under Chosroes began a series of attacks resulting in the loss of Damascus (613), Jerusalem (614) and Egypt (619). At the same time Avar and Slav expansion continued around the Black Sea region, with the Slavs invading Thrace, Macedonia, Central Greece and the Peloponessus, while in 626, with the emperor and his army away in Lazica, Constantinople itself was attacked by a combined army of Sasanians (from the east) and Avars, Slavs and Bulgars (from the sea and the west). Subverting Persian trade was not a significant issue.

And the Byzantines were now in a position to establish their own silk industry. Weaving technology was already well-established in Syria and Egypt, the draw-loom was in use, possibly as early as the fourth century,⁵⁹ and, unlike the Chinese, the Byzantines did not need to import new Iranian-style skills to produce the elaborate patterns of rondels and heraldic beasts that characterised the international style. What they did need was the white mulberry, a tree native to China. Unfortunately there are no stories of mysterious monks with mulberry seeds, just Ovid's Pyramus and Thisbe and the blood-stained mulberries turning permanently deep red. But the trees did reach Byzantium, and mulberry plantations gradually became established in suitable areas of the Byzantine world, wherever seasonal agricultural workers could be found. As far as can be ascertained, the Asian tradition of sericulture as an on-going, trans-social family occupation integrated into a cultural tradition, the model found from Turkestan to Japan, was never followed in Byzantium; rather silk-production at all levels was established as a government-controlled industry undertaken by highly specialised guilds.⁶⁰

⁵⁹ A silk *samit* band, possibly Syrian in origin, dated 400–600 AD, with a William Morris-like design of alternating off-set rows of confronted birds and trees, has been identified as having been woven on a draw-loom. In the collection of the Metropolitan Museum of Art, New York

⁶⁰ Anna Muthesius, *Studies in Byzantine and Islamic Silk Weaving* (London: The Pindar Press, 1995)



Figure 18. Byzantine silk with imperial lion hunt motif, C7th.⁶¹

Postscript

By the tenth century Constantinople had become a major centre for silk manufacturing and marketing. Sericulture and the trade in cocoons, raw silk, yarn, and silk fabrics were in tightly legislated private hands, while the imperial workshops produced silks of exquisite quality, satisfying the needs of the court both for personal silks and for major items of diplomatic gifting to high-ranking officials such as successful military leaders, foreign dignitaries and courts, churches and monasteries (figure 19). Silk had become a major tool of Byzantine international

⁶¹ W. Fritz Volbach, *Early Decorative Textiles* (London: Paul Hamlyn, 1969)

diplomacy, and the imperial ateliers produced and stored quantities of magnificently woven textiles, many still reflecting the original international Sasanian style of pearl-edged rondels and confronted designs, many also featuring the imperial symbols of lion, eagle, and griffon.⁶²



Figure 19. Byzantine C10th tribute lion silk reliquary pouch from a German cathedral⁶³

However, although sericulture was practiced in various areas of the empire, imported cocoons, yarns, and textiles were still major trade items.⁶⁴ While imperial production was (with the occasional exception of off-cuts), exclusively for the use of the emperor and his government, the private silk trade reveals the on-going extent of importation. Private silk trade, codified by legislation such as the *Book of the Eparch* (c. 911), was organized under five trade and

⁶² Ibid.

⁶³ Anna Muthesius, *Byzantine Silk Weaving AD 400 to AD 1200* (Vienna: Verlag Fassbaender, 1997)

⁶⁴ George C. Maniatis, *Organization, Market Structure, and Modus Operandi of the Private Silk Industry in Tenth-Century Byzantium*, *Dumbarton Oaks Papers*, No. 53 (1999). Available at: <http://www.ttk.gov.tr/data/dop53.htm> Accessed 2006 July 7

manufacturing guilds: *metaxoprotai* (dealers in cocoons, raw silk, and yarns), *katartarioi* (yarn producers), *serikarioi* (silk weavers), *vestopratai* (sellers of domestically-produced silks), and *prandiopratai* (sellers of imported silks).⁶⁵ And by this time the source was almost certainly China, which had re-established its international markets in the Tang dynasty (618–906 AD) and, during the succeeding Song dynasty (960–1279), had turned to large-scale industrialization with the development of two-person draw looms, a factory production system, and commercial-level mulberry plantations.

But this later means of production occurred in a very different international milieu, one in which Islam had become the dominant religion of the near and middle East, and in which, from the mid-eighth century, the Sogdian traders were becoming subsumed into a more complex Turkic and Islamic world.⁶⁶ The particular set of international factors, religious and political, that encouraged Sogdian merchants to deal directly with Byzantium and may have resulted in their introducing sericulture to Justinian's Constantinople, had changed utterly.



Figure 20. Byzantine Nilotic silk⁶⁷

⁶⁵ Op. cit.

⁶⁶ Etienne de la Vaissière, 'Sogdian Trade', *Iranica* (2004). Available at:
http://www.iranica.com/newsite/articles/ot_grp7/ot_sogd_trade_20041201.html Accessed 2006 July 2

⁶⁷ Abegg-Stiftung Textile Museum, Riggisberg, Switzerland

Bibliography

Archaeology in Edinburgh. Annual Report, 2003. Available at:

<http://www.arcl.ed.ac.uk/arch/annrept/report2000/research.htm> Accessed 02/02/2004.

Boulnois, Luce. *The Silk Road.* London, George Allen & Unwin, 1966.

Brykina, G. *Central Asia in the Early Middle Ages.* 1999. Excerpts available at:

<http://www.krora.com/ca/index.html> Accessed 2006 July 6.

Centre for the Study of Eurasian Nomads. Available at: <http://www.csen.org> Accessed 2006 May 10.

Chinaknowledge: A Universal Guide for Chinese Studies. Available at:

<http://www.chinaknowledge.de/> Accessed: 2005 July 20.

Christian, David. *A History of Russia, Central Asia and Mongolia.* Volume 1. *Inner Eurasia from Prehistory to the Mongol Empire.* Oxford: Blackwell Publishers, 1998.

———. 'Silk Roads or Steppe Roads? The Silk Roads in World History', *Journal of World History*, Vol. 11, No. 1 (2000), pp. 1–26.

Compareti, Matteo. *Sogdiana: Iranian Culture in Central Asia.* London: CAIS at SOAS (Circle of Ancient Iranian Studies at the School of Oriental and African Studies, University of London). Available at: <http://www.cais-soas.com/CAIS/Geography/soghdiana.htm> Accessed 2006 March 12.

De la Vaissière, Étienne. 'Sogdian Trade,' *Iranica* (2004). Available at:

http://www.iranica.com/newsite/articles/ot_grp7/ot_sogd_trade_20041201.html Accessed 2006 July 2.

———. Trans., James Ward. 'Sogdian Traders, a History.' *Handbook of Oriental Studies: Section 8, Central Asia*, vol. 10, *Sogdian Traders.* Leiden, Boston: Brill, 2005.

- Digital Silk Roads. Available at: <http://dsr.nii.ac.jp/> Accessed 2006 July 8.
- Feltham, Heleanor. *Sasanian Silk and Silver*. UNSW Summer School Silk Road resources, 2005.
- Foltz, Richard C. *Religions of the Silk Road: Overland Trade and Cultural Exchange from Antiquity to the Fifteenth Century*. New York: St Martin's Griffin, 1999.
- Ghirshman, Roman. *Iran, Parthians and Sassanians*. London: Thames & Hudson, 1962.
- Good, Irene. 'On the Question of Silk in Pre-Han Eurasia'. *Antiquity* vol. 69 (1995), no. 266.
- Grenet, Frantz. 'Religious Diversity among Sogdian Merchants in China (6th Century AD): Zoroastrianism, Buddhism, Manichaeism, Hinduism.' Conference paper, 2005, not yet published.
- Hayashi, Ryoichi. *The Silk Road and the Shoso-in. Heibonsha Survey of Japanese Art*, vol. 6. New York, Tokyo: Weatherhill/Heibonsha, 1975.
- History of Silk: The Silk Road Foundation. Available at: <http://www.silk-road.com/toc/index.html>. Accessed 2004 August 24.
- Hunt, Patrick. *Byzantine Art as Propaganda: Justinian and Theodora at Ravenna*. Philog: Classical connections — commentary and critique, 2006. Available at: http://traumwerk.stanford.edu/philolog/2006/01/byzantine_art_as_propaganda_ju.html Accessed 2006 July 8.
- International Dunhuang Project (on line). Available: <http://idp.bl.uk> Accessed: 2005 September 5.
- Juliano, Annette L., and Judith A. Lerner. *Monks and Merchants: Silk Road Treasures from Northwest China. Gansu and Ningxia, 4th–7th Century*. New York: Harry N. Abrams, Inc., with The Asia Society, 2001.

- Kageyama, Etsuko. 'Use and Production of Silks in Sogdiana', *Transoxiana Journal of Oriental Studies*. Available at: <http://www.transoxiana.com.ar/Eran/Articles/kageyama.html>
Accessed 2006 April 7.
- Keay, John. *The Spice Route: a History*. London: John Murray, 2005.
- Kybalova, Ludmilla. *Coptic Textiles*. London: Paul Hamlyn, 1967.
- Laiou, Angeliki E. (ed.). *The Economic History of Byzantium: From the Seventh through the Fifteenth Century*. Washington DC: Dumbarton Oakes Research Library, 2002.
- Livius. *Articles on Ancient History*. Available at: <http://www.livius.org/home.html> Accessed 2006 March 12.
- Lubec, G., J. Holaubek, et al. 'Use of Silk in Ancient Egypt', *Nature*, March 4, 1993.
- Ma Chengyuan and Yue Feng (eds.). *Archaeological Treasures of the Silk Road in Xinjiang Uygur Autonomous Region*. Shanghai: Shanghai Translation Publishing House, 1998.
- Mango, Cyril (ed.). *The Oxford History of Byzantium*. Oxford: Oxford University Press, 2002.
- George C. Maniatis. *Organization, Market Structure, and Modus Operandi of the Private Silk Industry in Tenth-Century Byzantium*. Dumbarton Oaks Papers No. 53. 1999. Available at: <http://www.ttk.gov.tr/data/dop53.htm> Accessed 2006 July 7.
- Mann, Susan. *Precious Records: Women in China's Long Eighteenth Century*. Stanford, Calif.: Stanford University Press, 1996.
- Mayor, Adrienne. *Greek Fire: Poison Arrows & Scorpion Bombs: Biological and Chemical Warfare in the Ancient World*. New York, London: Overlook Duckworth Woodstock, 2003.
- Mode, Markus. *Court Art of Sogdian Samarqand in the 7th Century AD*. Available: <http://www.orientarch.uni-halle.de/ca/afra/index.htm> Accessed 2005 September 5.

Muthesius, Anna. *Byzantine Silk Weaving AD 400 to AD 1200*. Vienna: Verlag Fassbaender, 1997.

———. *Essential Processes, Looms, and Technical Aspects of the Production of Silk Textiles*.

Available at: <http://www.doaks.org/EconHist/EHB11.pdf> Accessed 2006 June 2.

———. *Studies in Byzantine and Islamic Silk Weaving*. London: The Pindar Press, 1995.

The Near East in Late Antiquity. *The Sasanian Empire*. Available at: <http://ecai.org/sasanianweb/>

Accessed 2005 September 10.

Oikonomides, Nicolas. *Silk Trade and Production in Byzantium from the Sixth to the Ninth*

Century: The Seals of Kommerkiarioi, *Dumbarton Oaks Papers*, vol. 40 (1986), pp. 35–

53. Available at: <http://www.jstor.org/> Accessed 2006 July 5.

Procopius. *On the Wars*. Internet Medieval Sourcebook, *Procopius: the Roman Silk Industry c.*

550. Available at: <http://www.fordham.edu/halsall/source/550byzsilk.html> Accessed 2006

June 30.

———. *The Secret History*. Trans. with an introduction by G. A. Williamson. Harmondsworth:

Penguin Books, 1966.

Rezakhani, Khodadad. *Between the Hammer and the Anvil: Mesopotamia and Syria between the*

Two Late Antique Powers, 502–562 CE. 2006. Available at:

<http://www.vishistorica.com/byz06-revised.doc> Accessed 2006 July 4.

Rudenko, Sergei I. *Frozen Tombs of Siberia: The Pazyryk Burials of Iron-Age Horsemen*.

Berkeley: University of California Press, 1970.

Scott, Philippa. *The Book of Silk*. London: Thames & Hudson, 1993.

Semenov, G. L. 'Dwelling Houses of Bukhara in the Early Middle Ages'. In *Transoxiana:*

Journal of Oriental Studies. Available at:

<http://www.transoxiana.com.ar/Eran/Articles/semenov.html> Accessed 16.02.04

Silk Road Narratives: A Collection of Historical Texts. Available:

<http://depts.washington.edu/uwch/silkroad/texts/texts.html> Accessed: 2003 August 5.

Skaff, Jonathan Karam. *The Sogdian Trade Diaspora in East Turkestan during the Seventh and Eighth Centuries*. 2003. Available at:

<http://www.upf.es/materials/huma/central/abast/sogdian.pdf> Accessed 2006 July 8.

Smith, William. *A Dictionary of Greek and Roman Antiquities*. London: John Murray, 1875.

Soucek, Svatopluk. *A History of Inner Asia*. Cambridge: Cambridge University Press, 2000.

Transoxiana. *On-line Journal of Oriental Studies*. Available at: <http://www.transoxiana.com.ar/>
Accessed 2006 June 2.

Tucker, Jonathan. *The Silk Road Art and History*. London: Philip Wilson Publishers, 2003.

Volbach, W. Fritz. *Early Decorative Textiles*. London, Paul Hamlyn, 1969.

Whitfield, Susan (ed.). *The Silk Road: Trade, Travel, War and Faith*. Hong Kong: Serindia Publications, 2004.

Wyatt, James C. Y., and Anne E. Wardwell. *When Silk Was Gold: Central Asian and Chinese Textiles*. New York: The Metropolitan Museum of Art, in cooperation with the Cleveland Museum of Art, Harry N. Abrams, Inc., 1997.

Yatsenko, Sergey A. *The Costume of Foreign Embassies and Inhabitants of Samarkand on Wall Painting of the 7th c. in the 'Hall of Ambassadors' from Afrasiab as a Historical Source*. Available at: www.transoxiana.com.ar/0108/yatsenko-afrasiab_costume.html - 101k
Accessed: 2005 November 2.

Yule, Sir Henry. *Cathay and the Way Thither*. London: Hakluyt Society, 1866. Digital Silk Roads Archive of Toyo Bunko Rare Books. Available at: <http://dsr.nii.ac.jp/toyobunko/III-2-F-b-2/index.html.en> Accessed 2006 July 8.

Collections:

- Abegg-Stiftung Textile Museum, Riggisberg, Switzerland
- The Art Institute of Chicago
- The Louvre, Paris
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