

THE SILK ROAD AND THE ECONOMY OF GAOCHANG: EVIDENCE ON THE CIRCULATION OF SILVER COINS

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Finds of silver coins (in particular Sasanian ones) and their imitations have been made at the historic Silk Road sites in China (primarily in Xinjiang) starting with the archaeological explorations of the early 20th century. In the Turpan/Turfan 吐鲁番 area, the finds of these coins have come mainly from the old city of Gaochang 高昌 [Fig. 1] and the nearby Astana 阿斯塔那 and Kara-Khoja 哈拉和卓 tombs. In the scholarship relating to this coinage, the pioneering studies by Xia Nai 夏鼐 are of particular importance for their discussion of the distribution of the sites, the identification of the mints, and the possible ways in which this coinage was used.¹ However, much remains to be done for precise numismatic description and dating of the finds, the latter task hindered by the often vague or incomplete record of excavations. Among the disputed questions is the degree to which at least some of the silver “coins” are in fact locally produced imitations, but produced by whom and where is not clear. At least for the Turpan area, it seems that the percentage of imitations is relatively small. However, one es-

timate regarding what is by far the largest hoard of silver coins (found at Wuqia 乌恰 near Kashgar) is that perhaps as much as one-quarter of the nearly 1000 “coins” are imitations, not Sasanian originals.²

For determining the use of the coins, mentions of them in the documentary record are important. One of the best known examples is a document found in Astana Tomb No. 135 and dated 639 CE, written in Sogdian, in which payment for a female slave was made in what is clearly indicated to have been authentic Sasanian drachms [Fig. 2, next page].³ While there are some uncertainties in the documents on account of the terminology referring to coinage, there seems little doubt that at least in the Turpan region, references to silver coins are to the Sasanian ones. The Chinese term that is used after the year 550 for such coins is *wen* 文.

Among the very useful studies providing a framework for understanding the changes in currency usage

Fig. 1. Satellite image of the ruins of Gaochang, with inset showing location of Turfan area in top center.



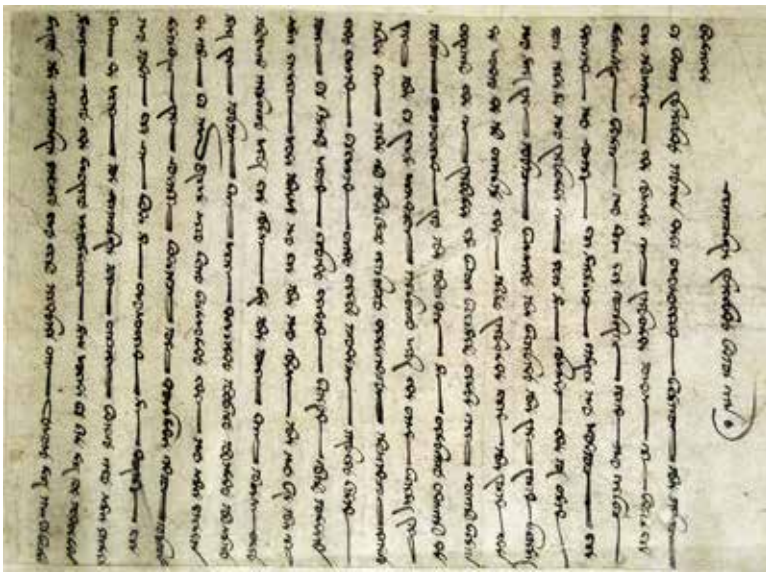


Fig. 2. A contract written in Sogdian for the purchase of a slave in the year 639 CE, unearthed in Astana Tomb No. 135. Photo courtesy of Daniel C. Waugh.

in Turpan is that by Lu Xiangqian 卢向前 (1992), whose periodization is as follows: carpet-based (367–482 CE), cotton cloth-based (482–560), silver coin-based (561–680) and copper coin-based (after 680). In his scheme, the silver coin-based stage could be subdivided into the period when only silver coin was currency (561–640) and the period when silk also began to be used as a means of payment (640–680). A somewhat simplified version of this periodization is the framework in which recently the American historian Valerie Hansen discussed the Turpan material as part of her broader survey of the place of coinage in the Silk Road trade in China and the impact of that trade on Turpan society (Hansen 2005, p. 303; 2011, pp. 95–96).

The role of the Sogdian merchants in the trade along the Silk Roads and in particular in the Turpan area has attracted a great deal of attention.⁴ In his study of Dunhuang and Turfan documents, Jiang Boqin 姜伯勤 (1994) analyzed how the Sogdians were using silver coinage in both places. The more recent work by Jonathan Karam Skaff (1998/1999) offers the most de-

tailed analysis in English regarding the finds of silver coinage in the Turpan region and its use, which in his argument peaked beginning in the 620s–630s.⁵ The assessments by the Gaochang State officials of the scale tax on commercial transactions and the disbursement of the coinage so collected in the form of salaries was, in his opinion, one of the main ways the coinage entered the local economy. However, some important aspects of the local system of taxation fell outside his purview, as is clear from the analyses of the tax system in the work of Sekio Shiro 關尾史郎, who argued that the scale tax constituted but a small portion of total tax revenues (Sekio 1994, p. 6).

In light of this work, we wish to address the following questions: In addition to the commercial tax levied on the Sogdians, what were other ways in which silver coins flowed into the local economy? Foreign merchants, envoys and other travelers might bring the Sasanian coins into Gaochang, but then they circulated locally amongst the civilian population, temples and government officials. Arguably, it was the local civilian population that was most involved in the circulation and use of the coins. If that was the case, then how did they acquire them? And apart from coinage, what else needs to be examined to provide a balanced picture of the functioning of the Gaochang economy? These issues are the focus of the following discussion.

There is considerable evidence that silver coins circulated routinely amongst the ordinary civilian population in Gaochang [Fig. 3]. Those employed in agricultural labor might use the coins for purchases or

Fig. 3. Silver drachms unearthed in Xinjiang: (left) obverse of Arab-Sasanian drachm with image of Khusro II and what appears to be overstamp of a Turkic (?) tamga, probably minted in the late 7th century; (center) reverse of Sasanian coin minted in Fars (S. Iran) or Ctesiphon (Iraq), possibly in regnal year 35 of Khusro II; (right) obverse of coin of Khusro II (590–628). Photos courtesy of Daniel C. Waugh.



receive payment in coin, pay their taxes in coin, and so on. For example, in the second year of Yanshou 延壽 (625), Tian Poji 田婆吉 rented several trees from Zhao Minger 赵明儿 for eight *wen* of silver coins; in the fourth year of Yanshou (627), Zhao Minger bought a craftsman with three hundred and eighty *wen* of silver coins; in the sixth year of Yanshou (629), Zhao Minger rented three *mu* 亩 (approx. 614 m²) of ordinary land from Zhao Bohuai 赵伯怀 with twenty *wen* of silver coins (Tang 1992–96, 2, pp. 240–42). Of course these transactions kept the coins in local circulation, whereas payment of taxes would reduce the amount of coins in circulation. There had to be external sources for maintaining that supply. There were various possibilities: compensation by the government for local production, transactions with merchants and travelers, or corvée compensated by the state. In another paper (Pei 2016b, pp. 56–65) we have examined how the government paid for locally produced wine that was then exported. One of the key areas involving payment was in the provisioning of foreign visitors traveling under government auspices, which will be the focus later in this paper.

The silk weaving industry in Turpan had developed since the age of the Sixteen Kingdoms (304–439 CE), when immigrants from the Central Plains fled disorders there, moving West through the Hexi Corridor [Fig. 4]. In the period of the Northern Liang 北凉 (397–439), the tax records begin to include items such as silk rent – collection of silk according to land assets, collection of silk according to the number of people per household, etc. The silk dyeing industry is documented in the period of Gaochang’s rule by the Kan 阚 family (second half of the 5th century) and obligations for payment of “official silk” continue in the period of rule there by the Qu 鞠 family (the 6th and first decades of the 7th centuries). As documented by Wu Min 武敏 (1987) from the official records, while it is not clear whether the government was much involved in

breeding the silkworms, it would buy or levy the cocoons and deliver them to the reeling craftsmen who in turn would receive “a considerable amount of *mi* 糜 [broom corn millet] according to their production of finished silk.” While the identity of the craftsmen is not specified, the evidence suggests production on a substantial scale under government auspices and payment in *mi*. In the late Qu period, the scale fee account of the Imperial Storehouse indicates that one Baijia Menzei “sold altogether in three transactions 170 *jin* 斤 [a unit of weight, 1 *jin* =1/2 kg] of silk, which required 2,720 *jin* of cocoons.” It is hard to imagine that one individual could have managed such a large transaction by himself. The evidence suggests the active involvement of merchants, “who would buy the silk directly from the producers and then sell it to foreign merchants.” Since such purchases from the local population would occur only irregularly, there would be no reason to draw up contracts which would have left a documentary record. The sale of silk could involve simply immediate payment in silver coin from the merchants traveling along the routes to the West.⁶

It is difficult to determine what the balance may have been amongst the various kinds of transactions involving silver coin which could explain how such coinage became available in Turpan. While he failed to provide specific examples, Moriayasu Takao (2007, p. 104) pointed out that along with the prosperity of long-distance trade and the frequent exchanges of trade caravans, merchants left their money and goods in the local society in various forms, such as transit duty, lodging fees, provisioning fees, purchase of other goods, repair charges, etc., which might promote

Fig. 4. Silk textile fragments found in Astana tombs, the one on right from Tomb No. 92. These date to the period of the Tang Dynasty and may have been woven locally. They are of interest for the “western motifs” of animals or birds in pearl roundels, designs popular, among other places, in Sogdiana.

Photos courtesy of Daniel C. Waugh.





Fig. 5. Agreement for buying a house, dated 613 CE. The unusual shape of such documents is due to their having been cut to create “burial shoes” for the deceased. That ensured they were preserved at the same time that it leaves many lacunae in the texts.

After: Selected Treasures of Turfan Relics, p. 116.

have existed.⁷ House purchase vouchers, which record transactions for the purchase of real estate, may help to answer that question [Fig. 5].

At present, four such vouchers are known from the period of the Gaochang State in addition to a voucher concerning the purchase of land. First of all, let us examine the relatively complete “Gaochang House Purchase Voucher of Sun Afushi 孙阿父师 in the Eighth Year of Yanshou (631),” which reads (Tang 1992–96, 2, p. 206)⁸:

On lunar November 18th of the Xinmao 辛卯 year of the eighth year of □□, Sun Afushi bought the house from Fan Xian 范显□□.

Three hundred wen of silver coins was paid for one house in the center of the city in the northeast district. Once the money was paid, the house was delivered.

The east side the house is separated from Guo Xiangxi’s 郭相慧 house by the courtyard wall; the south side faces the street, and the south side of the street is the courtyard wall of Guo Yangyang’s 郭养养 house.

[The west side of the house] is separated [from someone’s house] by the courtyard wall; the north side of the house is the courtyard wall of Zhai Zuohai’s 翟左海 house. Within the four quarters of the house [...].

If there is someone in the future who claims that the house is occupied and claims to be the owner of the house [...].

[...] If there is any burial gold found in the house, the house [...].

[...] The passage of the house which is used for transporting into it the firewood and forage and transporting out the waste still remains the same.

If there is someone in the future who claims that the house is occupied and claims to be the owner of the house, the landlord should be responsible for this. The two parties enter into a contract after the consensus is reached, and once the contract is concluded, neither side can go back.

If one party goes back, the party should pay the money which is as two times as the price of the house set in the contract to the other party who does not want to breach of contract. This is the private contract between the civilians and is valid for both parties. Each party should sign as evidence.

The person who wrote the contract: Jia □□.

the activity and development of local economy. Skaff (1998/1999) argues that “a major way for the silver coins to enter the local economy was through taxes on the Sogdian merchants.” He elaborates:

Although there is no documentary evidence, it is likely that merchants also used the silver coins to buy supplies and pay for transportation and lodging. Thus, by the means of governmental taxation of merchants and probably private transactions, Sasanian coins worked their way into the local economy. The silver coins became such a widely used medium of exchange that the government collected the land tax in silver specie, although those without coins could still pay their taxes in cloth. We can assume that governmental taxation of merchants was the most important means of bringing coins into the local economy... [p. 98]

However, he concludes that during the part of the 7th century when the Tang Dynasty government was still willing to accept silver specie in Turpan, “the coins appear to have been a minor component of the local government’s fiscal obligations” (p. 101).

Accommodation for travelers

Of particular interest to us here is the role coinage must have played in the arrangements made for visiting foreigners and traveling merchants. As Wang Su 王素 (2000, p. 540) has pointed out, even if direct evidence is hard to find, “the facilities of guest houses in the Gaochang State must have been very developed,” such inns made available by temples for visiting monks and nuns, by the Ministry of Soldiers, and by other government agencies. “At least so far, whether there were private inns in the Gaochang State is not yet clear,” although one might assume they should

Table 1: Table of Information in Gaochang House Purchase Contracts and House Land Purchase Contract

No.	Date	Contracting Parties	Type	Price	Location
1	584	Zhang Azhao 张阿赵; Monk Yuanhui 愿惠	Two houses	Five <i>wen</i> of silver coins	The east side of the house faces Zhang Acheng's 张阿成 house, the south side of street, the west side faces Zhang Zhaoyang's 张赵养 house, and the north side faces Zhang Acheng's house.
2	The seventh century ⁹	Zhao Huaiyuan 赵怀愿; Tian Liu Tong's 田刘通 son Afeng 阿丰	Two houses	Ten <i>wen</i>	Southeast district, the east side of the house is separated from Zhangjū Temple by the courtyard wall, the south side is separated from Zhao Huaiman's 赵怀满 house by the courtyard wall, the west side faces the street, and the north side faces the street.
3	The seventh century	Fan Abo 范阿伯; Zhu Alu 竺阿卢	House	Unspecified	Unspecified
4	631	Sun Afushi; Fan Xian □	One house in the center of the city	Three hundred of silver coins	Southeast district, the east side of the house is separated from Guo Xiangxi's house by the courtyard wall; the south side faces the street, and the south side of the street is the courtyard wall of Guo Yangyang's house, [...] is separated by the courtyard wall; the north side of the house is the courtyard wall of Zhai Zuohai's house
5	628	Zhao Shanzhong 赵善众; Sun Huibo 孙避伯; Fan Qingyue 范庆悦	Twenty <i>bu</i> of house land	Eight <i>wen</i> of silver coins	The house land is in Wucheng 武城xin's place, the east side faces the courtyard wall of Zhang Genu's 张客奴 house, the south side faces the courtyard wall of Shanzhong's 善众 place, the west side is separated from Zhao Haisiang's 赵海相 house by the courtyard wall, and the north side is separated from Zhang Yanshou's 张延守 house by the courtyard wall.

For comparison, here is a tabulation of information in other house purchase contracts from Gaochang:

These several contracts have features whose comparison may point to some connection with the establishment of inns for travelers. First of all, the location of all the houses is where traffic is convenient. For example, the house bought by Sun Afushi was in the northeast district, and the south side of the house faced the street; the house bought by Zhao Huaiyuan was in the southeast residential block, and both the west and north side of the house faced the street. Although the location of the two houses bought by Zhang Azhao was unspecified, the south side of the houses also faced the street. All the houses bought by these three people have the sides facing on streets which are in convenient proximity to the central area with a temple and square.¹⁰

Next, in three of the four house purchase vouchers (the contract of Zhang Azhao is incomplete; so we cannot tell in his case) there is a special instruction regarding whether gold was hidden in the house. While either the local population or transient merchants might have left such deposits, it seems more likely that the situation would arise when there was frequent turnover of residents. Given the substantial transient population in Gaochang at the time, the contracts might have been specifically addressing what was a common problem. With the exception of Zhu Alu though, the names of the contracting parties seem all to be Han Chinese.

Another aspect of the contracts may be suggestive here. Assuming Zhao Huaiyuan was a local resident, it would be reasonable to expect him to maintain con-

veniently situated houses such as those in the purchase document. Importantly, the price for his two houses was in fact much lower than what Sun Afushi paid for a single house. In fact, what Zhao Huaiyuan paid for two houses is similar what Zhao Shanzhong paid for twenty *bu* of house land. We might conclude then that the two houses bought by Zhao Huaiyuan had a small area with simple construction and equipment. In contrast, not only was the house bought by Sun Afushi very expensive, but also there was a special clause in the contract, viz.: "The passage of the house which is used for transporting into it the firewood and forage and transporting out the waste still remains the same." So it seems likely that Sun Afushi's house was equipped to handle large pack animals, such as camels and horses, which might be accompanying its lodgers. This would help explain why the price was quite high. If my inference is correct, this fully equipped house

bought by Sun Afushi might have been a private inn that would continue to engage in such business.

The merchants on the Silk Road with cargo carried by pack animals were undoubtedly the main lodgers of private inns. Moreover, merchants generally came in groups, which would mean they stayed in a building that might have had a large number of rooms [Fig. 6].¹¹ These foreign merchants lived in private inns, consumed food and other items, and paid for them



Fig. 6. Some of the impressive remains of Gaochang, the picture in the middle right showing the outside of the walls near the southern gate. Photographed in 2008; courtesy of Daniel C. Waugh.

with silver coins. So the consumption of merchants is an important way in which silver coins entered the local economy.

Payment for cartage

Turning now to another of the ways silver coins would have entered the local economy, let us look at a document “On the names of the civilians summoned to provide bullock carts and the given prices in Shichang County 始昌县 and other counties” (Tang 1992–96, 1, p. 428):

[...] [Someone provided the bullock cart] and was given six *wen* of silver coins. □□ Bao 保 provided one cow and was given eleven *wen* of silver coins.

[Someone provided two bullock carts]. Next, Sun Yan 孙延□ of Shichang County provided one cow and was given eleven *wen* of silver coins.

Anzu 安足 provided one cow and was given eleven *wen* of silver coins. [...]

[Someone] provided ten carts and one cow for riding and was given the short-distance price which was for fetching the Chang wood on the riverside. [...]

Names of the civilians summoned to provide bullock carts in Shichang County: Dong Anbo 董安伯 provided a cow and was given twenty-six *wen* of silver coins. [...]

[Someone was given] three *wen* of silver coins. Military Staff Officer Shiyou 师祐 provided one cow and was given twenty-six *wen* of silver coins. Liu Yanming 刘延明 provided one cart. [...] [Someone] provided one bullock cart.

[Someone provided] one [...] and was given thirty-nine *wen* of silver coins. Zhang Yanxu 张延叙 provided one cow and was given twenty-□ *wen* of silver coins. [...] thirteen *wen* of silver coins.

Daoming 道明 of Luo 罗 Temple provided one bullock cart and was given thirty-nine *wen* of silver coins. Zhang Bo'er 张伯儿 provided one bullock cart and was given thirty-nine *wen* of silver coins. Zhang Bo'er [...]

Zhang Boxiu 张伯臭 provided one cow and was given twenty-six *wen* of silver coins. Tang Huaiyuan 唐怀愿 provided one cart and was given [...] *wen* of silver coins. Tian Laide 田来得 provided one cow and was given twenty-□ *wen* of silver coins.

□ Haixi 海意 provided one cart and was given thirty *wen* of silver coins. And altogether eight bullocks were provided for Assistant Minister Shi Huantai 史欢太 to be carried to Wuqi 坞耆 and he was given the long-distance price....

The document shows that when the government requisitioned the cattle and the carts from the civil-

ians, the payment in silver coins to those providing bullock carts was divided into short-distance price and long-distance price. The long-distance payments were respectively thirteen *wen* for cart, twenty-six *wen* for cattle, and thirty-nine *wen* for cart and cattle; and the short-distance payments six *wen* for cart, eleven *wen* for cattle, and seventeen *wen* for cart and cattle. As Arakawa Masaharu (1989), who devoted a special study to this document, suggested, it is likely that this document dates from the Yanshou 延寿 reign (624–640). Since all the suppliers of long-distance carts and cattle were paid with silver coins in accordance with the regulations, no matter who they were (officials, civilians or monks), it is difficult to regard supplying of long-distance carts and cattle simply as the imposition of a heavy duty. The imposition of a long-distance horse tax had begun in the Zhongguang 重光 reign (620–624). The document we have here from the Yanshou period reflects a move away from the original compulsory requisition of horses for transportation to the hiring of long-distance carts and cattle and the stabilization of suppliers. This kind of reform made the proportion of the use of silver coins in the tax imposition increase. Moreover, worth emphasizing is the fact that size of the payments both for long-distance and short-distance hauling was not low.

Another document that reflects the royal government's payment of silver coins to civilians is one we refer to as the “Zhang Tuan'er 张团儿 Silver Coins Account” unearthed in Astana Tomb No. 388 (Liu 1997, pp. 73–75). This document has no calendar information, but the last part of the document about presenting the camelthorn firewood unearthed in the same tomb was in the twelfth year of Yanhe 延和 (613), so the date of the Zhang Tuan'er document may be close to it. The form of the document is to indicate sums paid in silver coins and the names of the recipients, with the amounts paid ranging one or two *wen* up to thirty *wen*. The recipients include officials, such as an assistant minister, a regular attendant, an interpreter, a military staff officer, etc., where the official positions are all noted before the names of the individuals. There are also names without indication of official position – “Zhang Tuan'er”, “Ma shamizi 马沙弥子”, etc -- who seem to be civilians. Others include a “Monk Fa□”, “Qulang Huanwu 鞠郎欢武”, “Qulang Caihuan 鞠郎财欢”, and so on. In some cases, the recipients are temples, e.g., “Yong'an Zhangling Temple 永安张令寺”, “Wulinku Temple 湾林窟寺” etc. There is no obvious connection between the amount paid and who the recipients are, but we may assume the document records compensation paid to officials, civilians, and temples for supplying goods or services. So, like the record of payment for supplying bullock carts, this document is also evidence as to how civilians would have been able to obtain silver coins from the government.

Table 2: Record of the receipts in silver coin from the sale of the temple's grain and the expenditures for which the money was allocated (Wu Zhen 1992/2009, pp.528-33).

1	Lunar October	Ten <i>wen</i> of silver coins was gained from ten <i>hu</i> of wheat and was used to buy □.
2	Lunar October	Thirty-eight <i>wen</i> of silver coins was gained from thirty-eight <i>hu</i> of wheat and was used to buy winter clothes for the temple.
3	Lunar October	Thirty <i>wen</i> of silver coins was gained from thirty <i>hu</i> of wheat and was used to buy five <i>hu</i> and one <i>dou</i> of □□□.
4	Lunar November	Three <i>wen</i> of silver coins was gained from four <i>hu</i> and five <i>dou</i> of millet and was used for daily expenses of the Winter Solstice.
5	Lunar November	Ten <i>wen</i> of silver coins was gained from five <i>dou</i> of wheat and fifteen <i>hu</i> of millet and was used to buy five <i>hu</i> of flax as the offerings of Buddha.
6	Lunar December	Five <i>wen</i> of silver coins was gained from seven <i>hu</i> of millet; one <i>wen</i> of silver coins was gained from one <i>hu</i> and four <i>dou</i> of millet and was used to buy flax.
7	Lunar December	Ten <i>wen</i> of silver coins was gained from sixteen <i>hu</i> of millet and was used to pay for the second part of the long-distance horse tax
8	Lunar January	Three <i>wen</i> of silver coins was gained from six <i>dou</i> of millet and two <i>hu</i> and nine <i>dou</i> of coarse rice and was used for New Year's Day.
9	Lunar January	Twenty-five <i>wen</i> of silver coins was gained from thirty <i>hu</i> of millet and five <i>hu</i> of coarse rice and was used to buy dung.
10	Lunar January	Thirty <i>wen</i> of silver coins was gained from twenty-six <i>hu</i> of millet and ten <i>hu</i> and five <i>dou</i> of wheat and was used to buy □ <i>hu</i> and nine <i>dou</i> of □□.
11	Lunar March	Three <i>wen</i> of silver coins was gained from three <i>hu</i> and nine <i>dou</i> of millet.
12	Lunar April	Sixty-nine <i>wen</i> of silver coins was gained from sixty-nine <i>hu</i> of coarse rice and was used to pay for lunar March's temporary collection of the official silk collected from the monks and the common people.
13	Lunar May	Three <i>wen</i> of silver coins was gained from three <i>hu</i> of coarse rice .
14	Lunar June	Six <i>wen</i> of silver coins was gained from five <i>hu</i> and four <i>dou</i> of wheat and was used to buy □□.
15	Lunar July	Three <i>wen</i> of silver coins was gained from two <i>hu</i> and seven <i>dou</i> of wheat.
16	Lunar August	Twelve <i>wen</i> of silver coins was gained from twelve <i>hu</i> of wheat and was used to pay for □'s [a certain month's] temporary collection of the long-distance horse tax.
17	Lunar August	Four <i>wen</i> of silver coins was gained from four <i>hu</i> of wheat and was used to buy two pieces of wood for repairing the bridge.
18	Lunar August	Eight <i>wen</i> of silver coins was gained from eight <i>hu</i> of wheat and was used to buy cart □.
19	Lunar August	Five <i>wen</i> of silver coins was gained from five <i>hu</i> of wheat and was used to buy one rim of a wheel.
20	Lunar September	One <i>wen</i> of silver coins was gained from one <i>hu</i> of wheat and was used to buy meat.

There were other possibilities for the local population to obtain coins, among them the production and provision of wine, which we will examine in detail in a later section of our paper.

The involvement of temples

The situation of temples, as suggested in the document just discussed and that cited earlier, was similar to that for ordinary laymen in Gaochang society: they too had to pay taxes and bear corvée, and they engaged in significant economic activity. As Wu Zhen 吴震 (1989/2009, 1990/2009, 1992/2009) has demonstrated, the temples had large-scale economic operations, in particular in the supply of grain and other agricultural products. He calculated that (excluding additional amounts that might have been traded through barter), one temple in a year received a total of 279 *wen* of silver coin for its grain, as detailed in Table 2 above. The units of measure are: 1 *hu* 斛 = approx. 1.7 bushels; one *dou* 斗 is about 1/10 of a *hu* (~a peck).

The majority of the income recorded here was used for the day-to-day expenses of the temple, the exceptions being that 91 *wen* was used to pay for the taxes of the royal government, such payments for the long-distance horse tax and the temporary collection of the official silk collected from the monks and the common people. As the table shows, the sales of grain also had significant seasonal differences. The sales in the six months of lunar February, March, April, May, June and July were significantly less than those of other months: there was no sale of grain in lunar February, and sales only once in each of the other five months, as one might expect because of the production cycle of local food crops. February to July was the main period for the growth of crops, and there would be new grain for storage only after the harvest period. As Wu Zhen has pointed out, the table does not record small amounts of grain used in barter trade or consumed by the people and dogs in the temple. In lunar

February, for example (not listed in the above table), there were three barter trades: “Four *hu* and eight *dou* of millet was used to buy two carts of camelthorn for managing □□ ditch”; “Two *hu* of wheat was used to buy □ carts of dung for the ditch field in the □ east”; and “Three *hu* of millet was used to buy one old *luoju* 洛举 [a tool for making bricks 砖]”. The amount of grain used in these deals was relatively small, but a similar amount of grain was used to exchange for silver coins in other months, for example, in lunar August “four *wen* of silver coins was gained from four *hu* of wheat and was used to buy two pieces of wood for repairing the bridge” (No. 17 in the above table), and in lunar September, “one *wen* of silver coins was gained from one *hu* of wheat and was used to buy meat” (No. 20 in the above table). Why did barter trade increase significantly in certain months? We might speculate that this is related to the number of foreigners in the market in different months. *Hu* merchants would try to choose the warm seasons and avoid the cold seasons for

long-distance transactions. Since lunar February was still in the cold season, the number of foreigners in the market would have been small, so there was more barter trade when silver coins were thus less abundant. In lunar August and September though, there were more Hu merchants coming to the market, so the grain was easily exchanged for silver coins. It is unlikely that the account tabulated above is complete, but it does reveal that the frequency of transactions during the year was not low and that it was easy to exchange even relatively small amounts of grain for silver coins. Most likely such transactions occurred only in the market, where they thus served as an important source for the income of temples in silver coins.

Moreover, as cited above in the document about payments for cartage, “Daoming of Luo Temple provided one bullock cart and was given thirty-nine *wen* of silver coins.” This is one of several such indications about the involvement of temples and shows that they had obligations similar to those of ordinary civilians, in return for which they could receive compensation from the royal government in silver coins at the long-distance short-distance rate.

Land tax

Let us now turn to the evidence about the role of silver coinage in the tax collection of the Gaochang State. Official records such as the *Zhoushu* 周书 state directly: “Tax is calculated on the basis of the area of the farmland and levied in the form of silver coins. If there is no silver coin, in the form of linen instead” (p. 915). Recent research that re-examines Turpan documents has questioned whether in fact that was the way the tax was collected in Gaochang.

Here are two of the key documents, which we will quote and then analyze. The first, dated 631, which we will call the Longzhi Account, reads as follows [Tang 1992-96, 1, p. 434]:

□ Longzhi 隆质 has four *mu* of land, Shi Azhong 史阿种 has four and a half *mu* 亩 and sixty *bu* 步 of land, He □yuan 和物愿 has sixty *bu* of land, Gao Yan □高延敢, Zhu Haizhong 朱海忠 has two *mu* of land, Fan Yuanhai 范元海 has three *mu* and forty *bu* of land, Feng Fangwu 冯方武 has five *mu* and sixty *bu* of land, □ Huairu □怀儒 has two and a half *mu* of land, Zhang Yuanyue 张元悦 has three and a half *mu* of land, Li Shanshou 李善守 has three and a half *mu* of land, Huang Nunu 黄奴奴 has two and a half *mu* and one hundred *bu* of land, Fan Qingyan 樊庆延 has two and a half *mu* of land, Jia Shanlai 贾善来 has two and a half *mu* and sixty *bu* of land, Kang Yanlong 康延隆 has seven *mu* of land, Xi Baoyue 系保悦 has two and a half *mu* of land.

On lunar June 7th of the Xinmao 辛卯 year of the eighth year of Yanshou, two *wen* of silver coins was paid.

Guangchang Temple 广昌寺 has four *mu* of land, Meng You□ 孟又□ has five *mu* of land, Zuo Wuxiang 左武相 has three *mu* of land, Bai Mu □ 白牧牛 has two *mu* of land, Tu Fabo 秃发伯 has four *mu* of land, Cao □□ 曹□□ has four *mu* of □, Yuan Yanbo 员延伯 has two *mu* and sixty *bu* of land, Zhao Zhongyang 赵众养 has four and a half *mu* of land, [...] Zhou Qinghuai 周庆怀 has six *mu* of land, Xia Yongshun 夏永顺 has three and a half *mu* of land, Jia Binu 贾婢女 has four *mu* of land, Fan Qinglong 樊庆隆 has two and a half *mu* of land, Liang Penghui 良朋悔 has three and a half *mu* of land,

On lunar June 7th of the Xinmao year of the eighth year of Yanshou, two *wen* of silver coins was paid.

The second document, which we will call the Xianshou 显守 Account, consists of several parts, found in Astana Tomb No. 78, whose epitaph is dated 642. While the document is undated, it likely is from the same period as one of the other texts found in the tomb that is dated 634. The relevant text reads [Tang 1992-96, 2, p. 42]:

[...] Monk has ninety *bu* of land and needs to pay [...] *wen* of silver coins;

General Xianshou [...] □ has ninety *bu* of land and needs to pay three *wen* of silver coins;

[...] one and a half of silver coins;

General Xianyou 显祐 has half *mu* and three □□ of land and needs to pay three *wen* of silver coins;

Monk Daofa 道法 has half *mu* of land and needs to pay [...] of silver coins;

[...] half *mu* and fifty *bu* of land and needs to pay three *wen* of silver coins;

Feng Boxiang 冯伯相 has ninety *bu* of land and needs to pay three *wen* of silver coins;

[...] Xiang 相 half *mu* of land and needs to pay two *wen* of silver coins;

Wang Mingxi 王明慧 has forty *bu* of land and needs to pay [...] of silver coins;

Qu Wenyu 鞠文玉 has sixty *bu* of land and needs to pay two *wen* of silver coins;

Kang Du 康犊[...] needs to pay one *wen* of silver coins;

Zhao Xian'er 赵贤儿 has sixty *bu* of land and needs to pay one [...] of silver coins;

Zhai Xi'er 翟慧儿 has thirty *bu* of land and needs to pay one *wen* of silver coins;

Zhao Xinhui 赵信惠 [...] needs to pay one *wen* of silver coins;

Linghu Huanxiang 令狐欢相 has sixty *bu* of land and needs to pay [...];

Zhao Luoyuan 赵洛愿 has sixty *bu* of land and needs to pay two *wen* of silver coins;

Monk Haihui 海惠 has half *mu* and thirty *bu* of land and needs to pay [...] of silver coins;
 Jiuju 究居 has sixty *bu* of land and needs to pay one *wen* of silver coins;
 Suo Sengbo 索僧伯 has sixty *bu* of land and needs to pay one *wen* of silver coins;
 Si □□ 思鼓□ Temple has seventy *bu* of land and needs to pay two *wen* of silver coins;
 Monk Daokai 道铠 has sixty *bu* of land and needs to pay [...] of silver coins;
 [...] *bu* of land and needs to pay one *wen* of silver coins;
 Monk Tanxu 昙鬲 has half *mu* and thirty *bu* of land and needs to pay three *wen* of silver coins;
 [...] and needs to pay four and a half *wen* of silver coins;
 Langzhong 郎中寺 Temple has one *mu* of land and needs to pay four and a half *wen* of silver coins;
 General Lai 来[...];
 Monk Haixiang 海相 has sixty *bu* of land [...] □ *yi wen* of silver coins;
 Shan Xiu'er 善臭儿 has sixty *bu* of land and needs to pay one *wen* of silver coins;
 [...] *bu* of land and needs to pay one [...] of silver coins;
 □ Military Staff Officer Shanhai 善海 has sixty *bu* of land and needs to pay one *wen* of silver coins;
 Military Staff Officer Ke'er 客儿 [...] four *wen* of silver coins;
 Zhao Xian 赵贤 □□□ *bu* of land and needs to pay two *wen* of silver coins;
 Official He Zhuzi 何祝子 has thirty *bu* of land and needs to pay □□ *wen* of silver coins;
 Anseng Jiali 安僧迦梨 has half *mu* of land □□ two *wen* of silver coins;
 labor man Xi Xiang 恇相 has sixty *bu* of land [...];
 [...] You 祐 has sixty *bu* of land and needs to pay [...] one *wen*;
 [...] Zhenjia 镇家 has one *mu* of land and needs to pay □ *wen* of silver coins;
 Dianlu 典录 [civilian official] Qingjun 庆峻 has sixty *bu* of land and needs to pay one *wen* of silver coins;
 [...]
 Monk □ Song 嵩 has thirty *bu* of land and needs to pay half *wen* of silver coins;
 Ding Shaoyou 丁绍祐 [...] thirty *bu* of land and needs to pay half *wen* of silver coins;
 [...] half *wen*;
 Monk Haifa 海法 has sixty *bu* of land and needs to pay [...] of silver coins;

[...] one *wen* of silver coins;
 Liu 刘 [...] □ and needs to pay one *wen* of silver coins;
 laborer Yinnai 寅柰 has sixty *bu* of land and needs to pay one *wen* of silver coins;
 laborer Zhong'er 众儿 has sixty *bu* of land and needs to pay [...]
 [...] *bu* of land and needs to pay half *wen* of silver coins;
 Zhai Huaixiang 翟怀相 has sixty *bu* of land and needs to pay one *wen* of silver coins;
 Shenbao 申保 [...] *bu* of land and needs to pay one *wen* of silver coins.
 Next, Zhubu 主簿 [civilian official] Da Xixia 大惠夏 □ [...]

There are differing opinions about the interpretation of the first document, the Longzhi Account, ambiguous as it is regarding whether it records a regular land tax or some extra levy, and what the basis for the calculation of the payment was (two *wen* per household or only two *wen* for every 50 or so *mu* of land held by several households). Possibly the payment indicated is in lieu of long-distance corvée obligation.¹²

On the other hand, the taxation rates indicated in the Xianshou Account were relatively explicit: generally 4 *wen* or 8 *wen* of silver coins per *mu*, and in some instances, 4.5, 4.8, 5.3 and 6.9 *wen* per *mu*. Yet the document presents its own problems, given the fact that the rates levied per unit of land vary so widely. Scholars have been divided as to whether this reflects not assessment of total land possessed but rather assessment on cultivated official land as opposed to wasteland, where the differential rates may also say something about the degree to which officials, as opposed to ordinary laborers, actually cultivated the land they held (Tang 1982, p. 319; Lu 1983, p. 69; Miyazaki 1985, p. 85). Sekio Shiro (1988, pp. 125–26) even has gone so far as to suggest that the subject here is not land rent as such in 7th-century Gaochang, and that the document reflects a different method of calculation dating from the earlier Northern Liang period. In light of this evidence and the varying interpretations, it does seem clear that the levies of the Gaochang State were keyed to the output of farmland and the processed products, such as wheat, millet, wine, silk floss. etc. Some types of “land rent” could be paid in silver coin. It is of interest then to break down the different categories of revenue according to the objects on which the taxes were levied.

Payments in kind: rent wheat, millet and rice

It is the documents from the late period of the Gaochang State which clearly record the imposition of land rent and in particular refer to payments in kind

of rent wheat, rent millet and rent coarse rice. Some of the documents do not specify the amount of farmland involved, although one can infer that the rent was calculated differentially according to the amount of land that was farmed. There are payments of eight *dou* of millet and four *dou* of coarse rice, where the prices of millet and coarse rice were similar to those in the market. Other documents recorded simultaneously the amount of farmland and the amount of paid grain in each case, from which it can be calculated that the payment standard was three *hu* per *mu*. While early researchers believed that this was the payment standard for wheat, millet and other crops as land rent, Xie Chongguang 谢重光 pointed out that the payment rate of three *hu* per *mu* should be that for rent wine of a vineyard on waste land, and other scholars such as Sekio Shiro agreed (Xie 1989, pp. 82–83; Sekio 1993, p. 38). In fact the rate of payment for rent wheat and rent millet is not clearly indicated in the documents. The best estimate now, by Wu Zhen (1992/2009, pp. 541–42), is that land rent of common people was levied at one-tenth of their assets; this would seem to translate into a rate of three *dou* per *mu*. In fact fragmentary documents found in Kara-Khoja Tomb No. 91 from the Northern Liang 北凉 period (first half of 5th century) (Tang 1992–96, 1, p. 78) include one specific indication of a rate of three *dou* and seven liters of wheat per *mu*; one can assume this standard continued to be used later in the Gaochang State.

Rent wine

It seems that the imposition of rent wine had already existed in Gaochang since the Northern Liang era. All people who owned vineyards needed to pay rent wine, be they civilians, officials, monks, nuns or temples. The normal payment was in kind, a lone exception to this noted below. A number of documents from the period of the Gaochang State, while not explicit about the source of the rent, can be inferred to relate to payments rent wine at a rate of three *hu* per *mu* (Liu 1997, pp. 77–78; Tang 1992–96, 1, p. 445). Among those documents are two examples where the payment by Fa Song of Zhao Temple was three *hu* and two *dou*, which lets us estimate the area of vineyard assessed at one *mu* and sixteen *hu*.

Careful palaeographic analysis of the documents that we argue relate to rent wine reveals interesting details about the complexities of the collection system and the various destinations to which the rent wine was to be delivered, following government instructions.¹³ It was used for the consumption of imperial kinsmen, for the professional

service personnel in all gates of the capital city, the monument hall, wing-room, and other places, and for the sacrifices and alms-giving of the government. With one exception, which relates to a delivery for a foreign destination, the documents all point to domestic consumption. While there is no explicit indication that any payments were intended for support of foreign envoys who might be in Gaochang, as we will suggest later, one can infer from some of the provisioning documents that wine was involved.

There is only one example which clearly recorded the payment of rent wine with silver coins, a document recording “Payment of Rent Wine with Silver Coins Collected from Kang Baoqian 康保谦 in the Fourteenth Year of Yanshou [637],” where the amount paid was two *wen* of silver coins (Tang 1992–96, 2, p. 22). It is likely that the absence of other documents recording such a payment with silver is an indication this possibility occurred only toward the end of the Gaochang State; one might assume that such payments were but a small portion of the state’s tax revenue in silver.

Kang Baoqian’s payment merits additional comment. The possession of a vineyard obviously was a prerequisite for the payment of rent wine in the Gaochang State; farmland on which were levied rent wheat and rent millet did not pay rent wine. Some accounts record the area of the vineyard before the record of each household’s payment; in certain instances, while the area of the vineyard is specified, there is an indication of “no rent” because, one assumes, of some special exemption. Since Kang Baoqian had a vineyard and the obligation to pay rent wine, then why did he not pay the rent wine like others (in kind), but paid silver coins instead? In the same year when he paid retroactively the silver coins for rent wine due for the previous year, Kang Baoqian spent more than twenty *wen* of silver coins buying another vineyard [Fig. 7]. In the documents unearthed in the same tomb, there is an agreement which shows that Kang Baoqian spent

Fig. 7. The Astana cemetery and another of the documents recycled for a burial, this one a contract for the purchase of a vineyard. After: Selected Treasures of Turfan Relics, pp. 138, 116.



seven *wen* of silver coins and one *hu* and four *dou* of grain hiring Liu Sihai 刘祀海. Furthermore, there are documents which record Kang Baoqian's payment in silver coin of the taxes for camelthorn firewood supplied for the courier station and spun silk, all of which suggests that he was well supplied with silver coins. This should not surprise us, as his name indicates he was a Sogdian, whose family came from Samarkand. Presumably he was an astute businessman, buying another vineyard at a time when he already worked one and paying his taxes in silver coins, where he had managed to postpone the payment of his rent wine levy. One might infer that he would have been selling the wine produced in his own vineyard and then using the profit to pay the arrears of the rent wine levy in silver.

Taxes on commerce

As earlier scholars have emphasized, other sources through which the Gaochang State obtained silver coins included taxes on commercial transactions. The scale tax account found in Astana Tomb No. 514 (Tang 1992-96, 1, pp. 450-52) has attracted much attention, since it specifies a wide range of goods and names the individuals involved in the transactions. The goods included precious metals such as gold, silver, copper, chalcopyrite (a copper-bearing ore), spices, turmeric root, sal ammoniac, medicines, silk, etc. While the groups involved in the transactions included people from Qiuci 龟兹, Gaoche 高车, and Jushi 车师, as well as Han Chinese, the majority of those involved on both sides of commodity transactions were Sogdians. The royal government weighed the goods and taxed by weight but with differential rates depending on the type of goods. Payments were in silver coin although the total collected in any given year did not exceed 500 *wen* and thus did not constitute the government's main source of income.

Zhu Lei 朱雷 (1980/2000) has argued that scale fees were only one of several kinds of commercial taxes paid to the Gaochang State by merchants (mainly Hu merchants) and that Zang 臧 money was also a kind of commercial tax. However, beyond the fact that we know Zang money was stored along with the scale tax collections in the Imperial Storehouse, it is difficult to know exactly what this levy was (Tang 1992-96, 2, pp. 2-3). While there were undoubtedly other kinds of commercial taxes, Zang money seems not in fact to have been one of them. It may have been a penalty imposed on foreign merchants who were caught trying to avoid paying tax on private transactions (Song 2001/2003; Pei 2016a, pp. 146-47).

Expenditures

The paucity of documents makes it very difficult to calculate what the total revenues of the Gaochang



Fig. 8. One of the many documents of the Ministry of Soldiers unearthed at the Astana cemetery. After: Selected Treasures of Turfan Relics, p. 117.

State in silver coinage may have been. What we do know is that figures for expenditures of silver coin vastly exceed what we can document about revenues and thus lead to the conclusion that there was a great deal of income for which we cannot precisely account.

One kind of expenditure, which presumably was incurred with some regularity, was the purchase of horses from the neighboring nomads. Several documents concerning the purchase of horses by the Gaochang Ministry of Soldiers in the twenty-seventh year of Yanchang 延昌 (587) were unearthed in Astana Tomb No. 48 [Fig. 8]. Although many of the documents are incomplete, they contain a good deal of credible evidence about the size of the purchases of horses with silver coin. Wang Xinmin 王新民 who analyzed this material, concluded from six of the documents that from April to August in that year, the Ministry of Soldiers bought a total of 122 horses and spent 4,154 *wen* of silver coins (Tang 1992-96, 1, pp. 338-44). A seventh document, not included in that calculation but from the same year (no month specified) recorded the purchase of two horses for sixty-seven *wen* of silver coins. If an eighth document that is substantially incomplete is also included, then only in roughly half a year in 587, the Gaochang State entered into eight transactions in which it paid over 4000 *wen* of silver coins for horses.

Since there was a long period in which the Gaochang State recognized the neighboring nomadic rulers as their sovereigns, part of the revenues in silver coins



Fig. 9. Tomb figurines (*mingqi*) depicting foreigners on the Silk Road: (left). A groom, from Astana Tomb No. 206 of Zhang Xiong (d. 633) and his wife Lay Qu (d. 689); (right) a foreign monk or merchant, collection of the Gansu Provincial Museum, Lanzhou. Photos courtesy of Daniel C. Waugh.

was turned over to those nomads, the Tiele and the Turks. The historical sources indicate that the Tiele “constantly stationed important ministers in the Gaochang State, and if there were Hu 胡 merchants coming and going, (the minister) would levy a tax on the (Hu merchants) and send the tax to the Tiele” (*Suishu*, p. 1848). Subsequently, in the reign of Tong Yehu Qaghan of the Western Turkic Qaghanate (618–628 or 630), “all the kingdoms in the Western Regions were granted *Jielifa* [颍利发 a kind of rank or title of the Turkic Qaghanate] and one *Tuton* 吐屯 [a Turkic official] was sent to supervise and govern them and to urge the imposition of tax” (*Jiutangshu*, p. 5181). Although there is no explicit indication that the Turkic qaghan actually collected a commercial tax in Gaochang the situation probably was similar to that with the Tiele, who seem to have done so.

Expenditures in support of foreign visitors

There was a large number of foreigners in the Gaochang State, whose visits often were supported by the government [Fig. 9]. Wu Yugui 吴玉贵 (1990) calculated that it received up to 9300 official envoys in a single year, to which one must add the presence of foreign merchants, monks and others.¹⁴ While this example may be an extreme case, with the written account an exaggeration intended to emphasize the local ruler’s generosity, Xuanzang 玄奘 reports his courteous reception by Qu Wentai 麴文泰. When the pilgrim monk departed, the ruler gave him “a hundred *taels* 两 of

gold, thirty thousand *wen* of silver coins, five hundred *pi* 匹 of damask silk and spun silk, etc., which were used as the capital for the Master’s journey for twenty years, as well as thirty horses and twenty-five laborers.” (Hui Li 2000, p. 21). Obviously if the items other than silver coinage are converted into their silver equivalent, the grand total of the gifts was very substantial indeed. Royal expenditures for visitors, even if not on such a lavish scale, surely would have represented a significant item in the state budget.

This paper will now examine how in Gaochang food and wine were supplied for foreigners. A good many documents unearthed in the Astana and Khara-Khoja tombs provide evidence. Wu Yugui has analyzed several of them which pertain specifically to the provisioning of visiting Turks; an English translation of those documents can be found in an appendix to one of his articles (Wu Yugui 1990; for the translations, 1991/2012, pp. 29–40). He dates the texts in question to the later 6th and early 7th centuries and suggests that the documents may constitute “the provisioning record from a Gaochang guesthouse that received foreign emissaries.” In our analysis, we consider as well several other provisioning documents.¹⁵

Some of the documents specify precisely what kind of food was supplied, most commonly wheat flour, broomcorn millet and wheat bran, and in some cases parched flour and *mi* rice. Provisions also undoubtedly included wine and meat, although the documents are not so specific. With regard to wine, the evidence in part is to be deduced from the context in which provisioning documents are found, either along with separate documents pertaining specifically to wine, or sometimes copied on the reverse of ones that can be related to the levying of rent wine for domestic consumption. It seems clear that where wine was involved, the rent paid was given directly to foreign emissaries by the producers, not transmitted via a government intermediary. The provisioning documents generally indicate who provided the supplies and when, what the quantities were, and who the recipients were. While the quantities involved varied, the recipients ranged from individuals of higher rank to those at the bottom of the social scale; records of the supplies for foreigners are simply included in sequence with those directed to domestic consumers.

A close examination of certain documents pertaining to the provisioning of grain reveals some additional information about the way supplies were collected and distributed that in its turn sheds light on the nature of revenue collection by the Gaochang Government. Kara-Khoja Tomb No. 33 contains the following provisioning document relating to collections from one Zhongbao 众保 and others (Tang 1992–96, 1, pp. 238–40):

[...] Zhongbao 众保 transmitted orders to use twenty-two *hu* and five *dou* of parched flour which was delivered to Wang Chongzhen 王崇真 and Buhe 步呵 to supply for twenty-? [...] official pack animals.

On the fifth day, General Tiannu 天奴 transmitted orders to use three *hu* of flour which was delivered to Kang Gousao 康苟扫 and Zhang Ayou 张阿祐 to supply for [...] Xi 奚, the prince envoy of He State 何国 [one of the nine oasis states in the Central Asia during the period of the Sui and Tang Dynasties, that is Nine Surnames of Zhaowu].

[Some] monk transmitted orders to use twenty-five *hu* of parched flour which was delivered to Official Shulai 恕赖 to supply for the government to tan two hundred and fifty pieces of sheepskins. And then Zhonglang 中郎 [official title] Jiazi 伽子 transmitted orders

[...] to use several *hu* of grain which was delivered to Yin Hei'er 阴黑儿 and Jia Baoshou 贾保守 to supply for Youdan 由旦 and other people, altogether 5 Tutun [Turkic official] envoys of Yiwu 堽昊 [today Hami in Xinjiang] as the food during the journey.

[in a different, smaller, hand:] delivered to Yan Youzi 颜有子 and Jia □'er 贾□儿 [...] And then Cheng Yuan 程愿 supplied one *hu* and three *dou* of wheat which was delivered to Linghu Xiaowen 令狐孝文 [...].

The only reference in the entire document to the supply of wheat as a grain is that in the final section, where it has been added in smaller characters. Flour and parched flour were not direct levied objects of land rent. If they were used for provisioning, where were they from? While my interpretation is somewhat speculative, given the fact that the document has lacunae and is incomplete, what we seem to have here is an indication that there was no difference in source or recipient when it came to supplying both un-processed and processed grains (flour and parched flour). If, as seems to be the case, the payers of land rent in grain were delivering some of it directly to the recipients as official provisions, then it seems that these same producers were delivering as well the processed flour. A fragmentary document obtained by Aurel Stein (now British Library OR.8212/982), seems to confirm that land rent could be paid in grain or in flour, and that such payment could be made either to a government department or to specified private individuals. Where land rent levies were being delivered directly to foreign emissaries, we can assume the latter were receiving them free of charge as part of the official provisioning the government provided.

What is the evidence for the provisioning of meat? As with the case for provisioning of wine, most of our evidence must be inferred from documents that spec-

ify measures or quantities, but do not name the product itself. The critical indicator in this case is the term *jin* (approximately 1.3 pounds), that seems to be used specifically to designate a quantity of meat. Key evidence is in documents found along with ones found in Astana Tomb No. 307 relating to provisioning of grain and taken into account above. There are two parts of a "Gaochang Account on Payment of Silver Coins" which read as follows (Tang 1992-96, 1, pp. 419-20):

(I)

Six *wen* of silver coins was paid to Baoshou 保受, and three *wen* of silver coins was paid to Hu'er 虎儿. And then on 30th, five *wen* of silver coins was paid to Xiao 孝 [...].

Several *wen* of silver coins was paid to Hongzhou 弘周, three *wen* of silver coins was paid to Hu'er, and four *wen* of silver coins was paid to Pipi 皮皮. [In the latter half of May], there was two hundred and sixty-four and a half *wen* of silver coins in total. And then on June 1st, eleven *wen* of silver coins was paid to Pipi. And then six *wen* of silver coins was paid to Baoshou, one *wen* of silver coins was paid to Xiao Zhongzi 孝忠子, and one *wen* of silver coins was paid to Baoshou.

And then on 2nd, five *wen* of silver coins was paid to Er'er 儿儿, five *wen* of silver coins was paid to Hongzhou, and three *wen* of silver coins was paid to Xiaozhong 孝忠. □□□

(II)

[...] And then four *wen* of silver coins was paid to Hongzhou. And then on 14th [...]

[Several *wen* of silver coins was paid to Pipi?] And then nine *wen* of silver coins was paid to Hongzhou and Hongzhou still owed half a *jin* [of meat?]; and then two *wen* of silver coins was paid to Zhang Qianchong 张谦忠; and one *wen* of silver coins was paid to Hongzhou 弘周. And then on 15th, seven *wen* of silver coins was paid to Hongzhou since Hongzhou supplied two *jin* of Chang meat 羶肉; and then five *wen* of silver coins 4 was paid to Hu'er. And then on 16th, eight *wen* of silver coins was paid to Qianzhong 谦忠, and two *wen* of silver coins was paid to Yang 养 [...].

Before proceeding to analysis of the texts, we should first note that in the absence of any official titles for the recipients of the payments, we might assume they were ordinary civilians. As far as the quantities of coins paid out are concerned, the total paid to four individuals on June 1 was 19 *wen*; on other days 12 *wen* possibly was normal. However, there is an added line (in a different hand) indicating a total of 264.5 *wen*, which likely was for half a month, given the fact that accounts in Gaochang apparently were kept on a semi-monthly basis.

The reverse of the second of these is a provisioning document relating to a certain Huya Duzi 虎牙都子 and others, in which the quantities of whatever was provisioned are measured in *jin* (for its translation, see Wu Yugui 1991/2012, p. 33). We may assume then that both sides of the document related to provisioning of meat, measured in *jin*, where at least in one instance the subject is specified as a particular kind of meat ("Chang meat"). The reverse of the first part of the document quoted above is a text about the purchase of sheep for sacrifices, in which the key phrase is: "buy a sheep, which is converted to ninety-nine *jin* of payable meat." So the government was in the business of obtaining meat from civilians for its various purposes. And since meat was not included as one of the levies in kind paid by the population, silver coins were used to pay for it. However, it also seems likely, as a close reading of the Huya Duzi document shows, that only some members of an embassy might receive the meat gratis, whereas others probably would have had to pay for it themselves in silver coin. An analogous situation might be that recorded in another provisioning document from Astana Tomb No. 154 (Tang 1992–96, 1, p. 368), which details special allocations for certain high-ranking officials in a way that suggests they received the provisions for free, even though we can infer that those of lower rank, including members of an embassy, might have had to purchase specialty food items in the market.¹⁶ It is entirely possible that such purchases were quite sizeable and thus added significantly to the inflow of silver coinage into the Gaochang State.

The foreign merchants from the West and the flow of coins

Apart from envoys, the foreign merchants in the Gaochang State certainly were important as a source of silver coinage, a fact that has long been known and need be only treated in summary fashion here. The most frequently cited source regarding their involvement in commercial transactions is the scale fee record, "The Gaochang Account on Weighing Money by the Imperial Storehouse," to which one should also add the "Gaochang Book for Registering Names of Caomo Mentuo 曹莫门阢 and Others" (unearthed in Astana Tomb No. 31 which dates from ca. 620). In particular, the individuals involved can be identified as Sogdians, whose surnames specify which Central Asian city was their home. The first of these documents lists 16 individuals with the surname Kang (from Samarkand), 10 He (Kushaniyah, north of the Zaravshan River), 6 Cao (Kabudan), 5 An (Bukhara) and one Shi (Chach/Tashkent); that is a total of 38 Sogdians.¹⁷ The great majority of the transactions recorded in the document involved Sogdians, 13 of the cases ones in which they were the only contracting parties. The second document, the name register, includes 45

Sogdians, 33 of them with the surname Cao.¹⁸ While there is other evidence about Sogdians who were permanent residents of the Turpan region, as Skaff has suggested (1998/1999, p. 95), since for the most part the individuals listed in the scale fee document were each involved in but a single transaction, they "appear more likely to have been itinerant, moving from oasis to oasis buying and selling goods in search of profit." Presumably then they required accommodation while in Gaochang, but, unlike the envoys who figure in the provisioning records discussed above, these Sogdian merchants do not appear in such records. They were private caravaneers, not official emissaries, and thus presumably had to arrange accommodation at their own expense. One might hypothesize that they made such arrangements through contacts in the resident Sogdian community with individuals such as Kang Bouqian, whose sales of wine might have been to the visitors. Resident Sogdians were engaged in hunting, planting grapes, making wine and other activities in the settlement. However, agricultural activities are little in evidence in the imagery of the Sogdian funeral beds found in China, suggesting that perhaps this was but a minor part of their activity. If that is the case, then presumably purchase of produce from other Turpan residents would have been essential.

The nature of these transactions though, has left little trace in the written record. One of the rare examples which reflect what we assume may have been a common occurrence is in a provisioning document from 622 specifying that "Kang Jiang 康将 buy three sections of meat, together with his own twelve pieces of meat and one *hu* and five *dou* of flour, for rewarding fifteen Hu customers." While some of the other recipients named in this document seem to be of high status, the allocation specified here for the fifteen Hu is quite modest, probably no more than a day's food for that number of individuals. Unlike the more prominent recipients, who appear in a number of other entries, these fifteen Hu are mentioned but once. As earlier analysis has indicated, they must have had other options for accommodation and provisions: there were private inns such as the one we have posited belonged to Sun Afushi, and as Wu Zhen has shown (1989/2009; 1990/2009; 1992/2009), there was considerable expansion of agricultural production by temples, which must have gained a substantial share of the market for grain and whose income in silver coins undoubtedly came at least in part from such market transactions. The private transactions involved may well have involved payment in silver coins.

Conclusion

What may seem to be a rather narrowly focused study about the sources and circulation of silver coinage in the Gaochang State has broader implications for our

study of the historic silk roads and their impact on local societies. Earlier literature has tended to focus on the long-distance commerce which passed through the Turpan region, largely in the hands of foreign merchants, as a source for the influx of silver coinage via the imposition of taxes on commercial transactions that were paid to the state. A close examination of the extant Turpan documents suggests a number of other ways in which silver coinage would have entered local circulation and been used for various kinds of payments, not all of which had to do with the long-distance trade. That said, many aspects of this economic activity at least indirectly relate to communication and economic activity along the Silk Road: the purchase of real estate, the expansion of agricultural production, the provisioning of travelers, be they merchants or emissaries.¹⁹

The degree to which the local oasis urban economy was based on commerce, as opposed to agriculture is one of the major issues on which there has been substantial disagreement.²⁰ In her analysis of the Silk Road trade, Hansen maintains that whatever the size of that trade, its impact on local economies such as that of Turpan was minimal (see e.g., Hansen 2010, p. 640). However, she also has provided a useful framework for distinguishing the different degrees to which certain social groups would have been involved (Hansen 2005a). In arguing that one finds evidence for the “commercialization” of the local economy (as indicated by the use of silver currency), she adduced some examples of how even ordinary people (“those least affected by the Silk Road Trade”) employed that currency in fulfilling certain obligations, even if the international trade as such was not the main source of their livelihood. In this regard, the evidence of several leasing documents involving agricultural resources such as a jujube tree and vegetable gardens is of interest (Tang 1992–96, 1, pp. 279, 292, 385, 446). The lessees paid in coin. There is good reason to think that the production of jujubes and the development of vegetable gardens in these examples may well have been in the first instance not to serve local consumption but rather to meet a market demand from the foreigners who were passing through.

What we have tried to do in this essay is deepen the understanding of how that local economy functioned in a period when arguably it was flourishing not simply because of the long-distance trade or active promotion by the local government but because there were markets supplied by local production and serving both local needs and catering to those of transient foreigners. An example of the limitations of stressing just the long distance trade in particular commercial products is the rise and fall of the silk industry in Gaochang, where it seems to have boomed at a time that

the silk from Central China was less available. Yet when stability was re-established under the Tang Dynasty and the central production of silk again became dominant, the broadly based local economy in Gaochang seems not to have suffered.²¹ The limitations of documentation present a real challenge, of course, for learning about the functioning of the day-to-day economy; obviously more study (and, might one hope, the unearthing of new evidence), is needed. But we should at least hesitate to assert that such economies were dominated *either* by commerce, *or* by agriculture, as both were important and very much interconnected.

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Notes

1. Xia's collected works (1957/2017) contain reprints of his most relevant essays; in particular his "Newly Unearthed Sassanid Persian Silver Coins in Turpan, Xinjiang" and "Summary on Sassanid Persian Silver Coins Unearthed in China." Discussion of other studies of this material and references to the work in Chinese may be found in Pei 2016a.

2. A catalogue of the Wuqia and one other recently discovered hoard has been published in Japanese (Tsumura and Yamauchi 2003), but as a reviewer has pointed out, in part because of the poor condition and inadequate cleaning of many of the specimens, its accuracy and detail are somewhat compromised (Tyler-Smith 2006). The approximation is that by Stephen Album, (cited here from Hansen 2011, p. 97; Album's essay in Chinese is published in the same conference volume). Note that the Arab-Sasanian coin depicted on the left in Fig. 3 is one found at Wuqia. For additional observations on some of the problems regarding our knowledge of the Sasanian coins in China and in particular those from Turfan, see Skaff 1998/1999, esp. 69–77, where, *inter alia*, he makes some critical observations about the reliability of Xia Nai's data. Citations to Skaff are to the English original of his article, not its Chinese translation.

3. A better photograph of the document is in Li 2003, p.118. For a translation, see Hansen 2017, pp. 181–82. Li on p. 120 also reproduces and explains a loan agreement of Zhang Haihuan, dated 665 (from Astana tomb no. 4), in which the amounts loaned are in silver coins.

4. The standard, broad history of the Sogdians in English is that by de la Vaissière 2005. Skaff (2003, 2005) analyzed in some detail the census and other documentary data for the Sogdian presence in Turpan. For an extensive bibliography of the publications about Sogdians in China, see *Xinxi yu cankao* 信息与参考 [Information and Reference] 2015 /11 (总第 21 期), an annual published by the Dunhuang Academy, pp. 137–70.

5. Marshak (2002, pp. 15, 18) pointed out that in about 509 CE, Sogdiana was incorporated into the newly established Hephthalite Empire. Around that time locally minted coins stopped being used in Sogdiana due to an influx of Sasanian coins supplied by Persia to the Hephthalites. Sogdian merchants soon brought these Sasanian silver coins to China. In the second half of the sixth century, with the rise of the Turks and their protection of the Sogdian caravans, the flow of the Sasanian coins increasingly passed along the northern routes of the Silk Road. This then could help explain how in the late 6th century, silver coinage became the main currency in the Gaochang State. See also the detailed discussion of these issues by Skaff 1998/1999, pp. 81–86.

6. It is worth emphasizing here that the scale fee record, while extremely valuable for what it tells us about a certain part of the commerce in Turpan, is limited when it comes to transactions involving silk, which commonly would not

have been sold by weight and thus not entered in the record. This may be one explanation for why Valerie Hansen's analysis emphasizing what she sees as a relatively small volume of "Silk Road" trade would seem to underestimate what may actually have been occurring. See Skaff 1998/1999, p. 93.

7. If Wu Yugui's (1990) estimate of Gaochang's annual reception of official envoys numbering up to 9300 people is accurate, accounting for one quarter of the total population, that alone would have taxed the ability of the town to accommodate all of them.

8. In the quotations from documents which follow, the symbol □ will indicate where a character is missing or unclear, and [...] will indicate where there is a larger lacuna in the text.

9. On dating issues, see Wu Zhen 1996/2009.

10. Information about the shape and structure of the Ancient City of Gaochang can be seen in Yan 1967 and Hou 1989. Surviving in the southwest of the existing outer city are the remains of a temple, around can be seen the remains of the southeast residential block and the northeast residential block. Around the temple is a square where the sellers might have displayed goods and where transactions might have taken place.

11. By analogy here, in the Sogdian homeland "the shopkeepers and craftsmen lived in two-storey houses with several rooms, but mainly did business and worked in rented shops and workshops located in wealthier areas. Coins have often been discovered in these shops" (Marshak, in Marshak and Negmatov 1996/2003, pp. 242–43). If house leasing for business purposes was common amongst the Sogdians in Central Asia, they might also have done the same in Turpan. While there is no specific evidence of Sogdian period caravanserais, it is possible that the courtyards of Sogdian castles served such a function (see de la Vaissière, pp. 191–93).

12. For the various interpretations see Pei 2016a, p. 141.

13. My detailed analysis of the documents can be found in Pei 2016a, pp. 148–53.

14. Although the many so-called "official envoys" were in fact a grouping of private caravans, the difference between the envoys and separate trade caravans was not large and the numbers of individuals involved in the latter fairly substantial. (See Enoki 1974/1993, pp. 163–66).

15. For a listing of the documents and specific references and for details of my analysis, see *ibid.*, pp. 153–62.

16. There is some disagreement over whether the difference in who received the food gratis was related to the identity of the envoys (Wu Yuqi 1990, p. 76) or whether the basis for a differential calculation was a matter of personal food intake (Wang Su 2000, p. 562).

17. Skaff gives a higher total of 41 and thus a somewhat different breakdown of the family names (1998/1999, p. 94); his statistics are the ones cited by Hansen (2005, p. 291; 2017, p. 161). For the surname identifications, see Wu Zhen 1999/2002, p. 4.

18. Cf. Wu Zhen (1999/2002, p. 5) who cites somewhat different statistics from this document, a total of 41 Sogdians, at

least 28 of whom had the surname Cao. His study also deals with the evidence about permanent Sogdian and non-Sogdian foreign residents of Turfan, as does Skaff 2003 (with a focus on the Sogdians).

19. In any such consideration, there is always the question of what goods might best be included in "Silk Road" trade, as opposed to those which might arguably be the concern mainly of the domestic economy (on this distinction, see, e.g., Arakawa 2003, pp. 10-13). Where, for example, does one put wine, which elsewhere in Eurasia clearly was a good that was traded over long distances even as it was consumed locally? Of course in this case, one important difference might be in the modes of transportation which were most commonly used to transport goods. Roman wine consignments, after all, would have been cargo in rather large ships.

20. Japanese scholarship has focused on these issues; see the different opinions by Mano Eji, Matsuda Hisao, Mori Masao and Moriyasu Tako, cited in Pei 2016a, pp. 166-67, notes 206-09. It is important to recognize that generalizing for all of the oasis states may be misleading, since there were regional differences. For example, see Zhu Yingrong's analysis (1990/2006, pp. 161-63) of the commodity economy of the Qiuci Kingdom, where a local focus only on agriculture would have been insufficient to support the construction and decoration of the grottoes and other civic projects. See also the comments of Wang 2004, pp. 93-94.

21. It would be a mistake, of course, to assume that local production, some of it intended for the international market, simply withered away at the onset of the Tang period. There is plenty of evidence to the contrary (see Sheng 1999).