

## Sasanian and Arab-Sasanian Silver Coins from Turfan: Their Relationship to International Trade and the Local Economy

### INTRODUCTION

Along the “Silk Road,” which ran between China and the Near East via Inner Asia and the Indian Ocean, China exported goods – silk being the best known – and in return received other products. Beyond this broad generalization, however, we know little about the actual commerce, especially as we go further back in history. Who carried out this trade, how they operated, and what goods, besides silk, they dealt in are questions that remain relatively unanswered. Fortunately, silver coins and documents discovered in Turfan provide us with an opportunity to gain deeper insights into Inner Asian commerce during the period lasting from the late-sixth to early-eighth centuries. These finds provide information about the identity of the merchants, the type of goods that they traded, the periodization and location of their activities, and their relationship to Turfan’s local economy.

Sasanian and Arab-Sasanian silver coins constitute the majority of specie relevant to international trade that has been discovered at Turfan.<sup>1</sup> Sasanian coins were minted by the Iranian dynasty of the same name. The Sasanians overthrew the Parthians circa 224 AD and reigned until the final Arab con-

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<sup>1</sup> At least nine Byzantine or imitation Byzantine gold coins have also been found in Turfan. Seven are mentioned in Thierry and Morisson's study of the Byzantine style coins that have been found within China's modern borders; François Thierry and Cécile Morisson, “Sur les monnaies byzantines trouvées en Chine,” *Revue numismatique* 6th ser. 36 (1994), pp. 109–45. Photos of two others have appeared in Chinese publications: Hsin-chiang Wei-wu-erh tzu-chih-ch'ü po-wu-kuan 新疆维吾尔自治区博物馆, ed., *Hsin-chiang ch'u-t'u wen-wu* 新疆出土文物 (Peking: Wen-wu ch'u-pan she, 1975), p. 133, pl. 194; Hsin-chiang Wei-wu-erh tzu-chih-ch'ü po-wu-kuan, ed., *Hsin-chiang Wei-wu-erh tzu-chih-ch'ü po-wu-kuan* 新疆维吾尔自治区博物馆, Chung-kuo po-wu-kuan ts'ung-shu 9 (Peking: Wen-wu ch'u-pan she, 1991), pl. 171.

quest of Iran in 651. The earliest Sasanian coins to appear in China or eastern Turkestan are those minted during the reign of the ninth ruler, Shāpūr II (r. 309–379). The latest are coins of the final Sasanian emperor Yazdgerd III (r. 632–651;<sup>2</sup> see table 1 for a chronology of Sasanian rulers depicted on coins found in Turfan tombs). The most common Sasanian coin – the type most usually found in China – was the silver drachm. Averaging about four grams at full weight, it usually was not debased.<sup>3</sup> After the Arab conquest of Persia, the Arabs continued to mint Sasanian-style coins for about fifty years when purely Islamic coins were introduced. The standard Arab-Sasanian coin was a silver dirham. It was a version of the silver Sasanian drachm and also had a full weight of about four grams.<sup>4</sup> Sasanian and Arab-Sasanian coins share most iconographic and epigraphic elements.<sup>5</sup> Where Arab-Sasanian coins differ from purely Sasanian ones is that they normally include an additional Arabic inscription.

We can suppose that the reason why Iranian coins were carried east was the high purity of their silver. Sasanian and Arab coinage normally had a silver content of over eighty-five to ninety percent. During the reign of Khusrau II (r. 590, 591–628) the average was around ninety-five percent.<sup>6</sup> On the other hand, the coins of the oasis states of western Turkestan, such as Bukhārā and

<sup>2</sup> Hsia Nai 夏鼎, "Tsung-shu Chung-kuo ch'u-t'u te Po-ssu Sa-shan ch'ao yin-pi" 綜述中國出土的波斯薩珊朝銀幣, *K'ao-ku hsüeh-pao* 考古學報 1 (1974), pp. 94–95. François Thierry, "Sur les monnaies sassanides trouvées en Chine," in Group pour l'Étude de la Civilisation du Moyen-Orient, ed., *Circulation des monnaies, des marchandises et des biens*, *Res Orientales* 5 (Bures-sur-Yvette: Group pour l'Étude de la Civilisation du Moyen-Orient, 1993), pp. 96–100.

<sup>3</sup> Robert Göbl, *Sasanian Numismatics* (Braunschweig: Klinkhardt & Biermann, 1971), p. 25.

<sup>4</sup> M. Bates, "Arab-Sasanian Coins," in Ehsan Yarshater, ed., *Encyclopaedia Iranica* (London and Boston: Routledge & Kegan Paul, 1982–) 2, p. 225.

<sup>5</sup> The obverse normally has a portrait of a Sasanian emperor wearing a crown with a design unique to his reign. In later times the Sasanian emperor's or Arab governor's name is written to the right of the portrait in Pahlavi script. There are various other ornaments and honorific inscriptions. On the reverse is a Zoroastrian fire altar with attendants on either side. Later Sasanian coins and all Arab-Sasanian coins include the year of issue to the left of the fire altar and an abbreviated name of the mint place to the right (see illustration page at the end of this article).

<sup>6</sup> Richard Frye makes this point about the appeal of Sasanian coins to merchants in "Ancient Central Asian History Notes," in Bert G. Fragner et al., eds., *Proceedings of the Second European Conference of Iranian Studies* (Rome: Istituto Italiano per il Medio ed Estremo Oriente, 1995), pp. 189–90. Our knowledge of the silver content of coins is thanks to the work of Adon Gordus, "Neutron Activation Analysis of Coins and Coin Streaks," in E. T. Hall and D. M. Metcalf, eds., *Methods of Chemical and Metallurgical Investigation of Ancient Coinage* (London: Royal Numismatic Society, 1972), pp. 127–48; idem, "Non-Destructive Analysis of Parthian, Sasanian and Umayyad Coins," in D. K. Kouymjian, ed., *Near Eastern Numismatics, Iconography, Epigraphy and History: Studies in Honor of George C. Miles* (Beirut: American University, 1974), pp. 141–62; and Gordus, "Neutron Activation Analysis of Microgram Samples of Sasanian Coins and Metallic Art" (paper presented at the Symposium on Material Issues in Art and Archaeology-IV, Cancun, Mexico, 1994).

Samarqand (see a list of place names in the Introduction to this volume of *Asia Major*), usually were debased to the extent that they were discolored.<sup>7</sup> Sasanian and Arab-Sasanian coins gained acceptance in eastern Turkestan and China because they guaranteed a high quality of silver.<sup>8</sup>

These coins have been discovered at various places around Turfan. The greatest number have been unearthed in the ruins of the ancient city of Kao-ch'ang 高昌 (Qocho). Around 130 coins have been found there, the vast majority from three hoards. All of these coins were minted during the reigns of fourth-century Sasanian emperors. The other major group of silver specie comes from several tomb sites in the Turfan area. Most of the coins from tombs have been discovered at the contiguous ancient burial grounds at Astana (A-ssu-t'ana 阿斯塔那) and Karakhoja (Ha-la-ho-cho 哈拉和卓) near the ruins of Kao-ch'ang. Two other coins have been found in separate graves at Yarkhoto (Chiao-ho 交河) about thirty-five kilometers west of Astana. The exact number of these coins is uncertain because of poor record-keeping, but is around thirty. The majority of the coins were found in the mouths of corpses.<sup>9</sup> Presumably a coin in the mouth was meant to provide spending money for the dead in the afterlife. The derivation of this custom is a matter of controversy with some scholars claiming a Chinese origin, while others believe it is a Greek practice that Alexander the Great's conquests spread to Inner Asia.<sup>10</sup> Several

<sup>7</sup> E. V. Zeimal, "The Circulation of Coins in Central Asia during the Early Medieval Period (Fifth-Eighth Centuries A. D.)," *Bulletin of the Asia Institute* 8 (1994), pp. 245–67.

<sup>8</sup> Hephthalite imitations of Sasanian coins do not appear to have been debased, but there is no research that has established the quality of silver. Zeimal believes that their more limited circulation in comparison to regular Sasanian issues was because their weights were considerably lower; Zeimal, "Circulation of Coins in Central Asia," pp. 255–56, 264. More research needs to be done on this problem.

<sup>9</sup> Hsia, "Tsung-shu Chung-kuo ch'u-t'u," p. 106.

<sup>10</sup> Aurel Stein originally described the phenomenon of placing coins in the mouths of the dead at Astana. He noted that a coin was placed in the mouth of the deceased in ancient Greece to provide the spirit of the dead with the fare to pay the ferryman of Hades, Charon (M. Aurel Stein, *Innermost Asia: Detailed Report of Explorations in Central Asia, Kan-su and Eastern Iran* [London: Oxford U.P., 1928] 2, p. 646). Hsia Nai vigorously opposed Stein's suggestion that the custom could have come from the West and noted that the practice existed in China during the Chou period; Hsia, "Tsung-shu Chung-kuo ch'u-t'u," p. 106. More recently Otani Nakao 小谷仲男 demonstrates that in Greece and Inner Asia burials of dead with coins in their mouths predate those in China. He believes that the custom spread to China from the west. However, he does not rule out the possibility that Chinese carried the custom back to Turfan by the sixth and seventh centuries AD: "Ssu-che k'ou chung han pi hsi-su Han T'ang mu-tsang so fan-ying te hsi-fang yin-su" 死者口中含幣習俗漢唐墓葬所反映的西方因素, *Tun-huang hsüeh k'an-chi* 敦煌學刊 1 (1990), pp. 129–42 (trans. of original article in *Toiyama Daigaku jinbun gakubu kiyō* 富山大學人文學部紀要 13.1). Thierry claims that the Chinese only placed jade or cowries in the mouth of the dead. He does not see any connection between this funerary practice and the one at Kao-ch'ang ("Sur les monnaies sassanides," pp. 101–2).

of the coins were found covering the eyes of the deceased. This appears to have been a Parthian custom that spread to Inner Asia and is still practiced by some nomadic groups in Mongolia today.<sup>11</sup> Several other coins have been found on the floors of tombs and probably were knocked down accidentally by grave robbers.

Study of the tomb discoveries represents an analytic problem separate from the discoveries of those from the ruins of Kao-ch'ang city, because almost all of the coins from tombs date to the late-sixth and seventh centuries, while the city hoards are from about two centuries earlier. Also, the tomb finds, unlike the city ones, are complemented by contemporary documents from the tombs that sometimes mention silver coins. From these documents we can learn more about how the coins were used in Turfan in the sixth and seventh centuries and how they fit into international trade.

It is important to realize that the presence of the coins in Turfan resulted from separate global, regional, and local trends. On the one hand, the coins represent the general, but not uninterrupted, tendency from the beginning of the Christian era to the early-nineteenth century for precious metals to flow from Europe and the Near East to South and East Asia. The gold and silver paid for the silk and spices of the East that were in demand in the West.<sup>12</sup> The evidence of the Sasanian and Arab Sasanian coins in China demonstrates that from the fourth to seventh centuries at least some precious metals were transported east in the form of specie. From the eighth century onward silver coins never again were brought from the Near East to China. Hoards in northern, central and eastern Europe have produced 200,000 Near Eastern dirhams that date mostly from the tenth century, but not one from the tenth century has been discovered in China.<sup>13</sup>

<sup>11</sup> Mihály Benko, "Burial Masks of Eurasian Mounted Nomad Peoples in the Migration Period (1st Millennium A.D.)," *AOASH* 46 (1992-93), pp. 113-31. The author points out that the placing of goggles over the eyes of the dead in some of Turfan's tombs probably is a related custom. These goggles have been found by Stein and Chinese archaeologists. Stein, *Innermost Asia* 2, p. 646. Hsin-chiang Wei-wu-erh tzu-chih-ch'ü po-wu-kuan, "Tu-lu-fan A-ssu-t'a-na 363 hao mu fa-chüeh chien-pao" 吐魯番阿斯塔那 363 號墓發掘簡報, *WW* 2 (1972), p. 7, pl. 5.

<sup>12</sup> Joe Cribb, "An Historical Survey of the Precious Metal Currencies of China," *Numismatic Chronicle*, 7th ser. 19 (1979), pp. 191-95.

<sup>13</sup> On the Near Eastern coins carried to Europe, see Peter Spufford, *Money and Its Use in Medieval Europe* (Cambridge: Cambridge U.P., 1988), pp. 65-68. Spufford, citing Cribb, "Precious Metal Currencies of China," pp. 192-93, states erroneously that some of the 9th- and 10th-c. dirhams that were found in Europe also made their way to China. The coins that Cribb refers to actually are the earlier Sasanian and Arab-Sasanian coins. The flow of coins from the Near East to Europe was carried out at lower levels from the sixth to ninth centuries and increased greatly in the tenth. The most extensive research on this flow of silver coins has been carried out by Thomas Noonan: "When and How Dirhams First Reached Russia: A Numismatic Critique of

This article treats the coin finds from Turfan as part of this long-term global trend, but also points out how their presence in Turfan was the result of short-term local and regional political and economic forces. Although coins flowed from Iran to China with peaks and troughs from the fifth through seventh centuries, they did not always appear in Turfan because of shifts in trade routes. Below, I attempt to explain the localized appearance of silver coins in Turfan in the late-fourth, late-sixth, and seventh centuries, and their role in the economy. Furthermore, I make suggestions about why the coins may have ceased to be imported to Turfan in the early-eighth century.

## THE COINS

The coins under study here are treated as two distinct groups. Finds from Kao-ch'ang city will be discussed first, and the tomb coins second. The city finds come from three different hoards and two random discoveries of single coins. Two of the hoards, numbering ten and twenty coins each, have been published with photos or rubbings of all coins. I have been able to examine them personally. Both hoards were found by farmers, and their exact provenance within the city is unknown. The two hoards have similar compositions. Both contain silver drachms of Shāpūr II (r. 309-379), Ardashīr II (r. 379-383), and Shāpūr III (r. 383-388).<sup>14</sup> Since both hoards contain coins of Shāpūr

the Pirene Theory," *Cahiers du monde Russe et Soviétique* 21 (1980), pp. 401-69; idem, "Ninth-Century Dirham Hoards from European Russia: A Preliminary Analysis," in M. A. S. Blackburn and D. M. Metcalf, eds., *Viking-Age Coinage in the Northern Lands*, BAR International Series 122 (Oxford: B. A. R., 1981); idem, "A Ninth Century Dirham Hoard from Devista in Southern Russia," *American Numismatic Society Museum Notes* 27 (1982), pp. 185-209; idem, "Russia, the Near East, and the Steppe in the Early Medieval Period: An Examination of the Sasanian and Byzantine Finds from the Kama-Urals Area," *Archivum Eurasiae Medii Aevi* 2 (1982), pp. 269-302; idem, "The Regional Composition of Ninth-Century Dirham Hoards from European Russia," *Numismatic Chronicle* 144 (1984), pp. 153-63; idem, "Why Dirhams First Reached Russia: The Role of Arab-Khazar Relations in the Development of the Earliest Islamic Trade with Eastern Europe," *Archivum Eurasiae Medii Aevi* 4 (1984), pp. 151-282; idem, "Khazaria as an Intermediary between Islam and Eastern Europe in the Second Half of the Ninth Century: The Numismatic Perspective," *Archivum Eurasiae Medii Aevi* 5 (1985), pp. 179-204; idem, "Khwarazmian Coins of the Eighth Century from Eastern Europe: The Post-Sasanian Interlude in the Relations between Central Asia and European Russia," *Archivum Eurasiae Medii Aevi* 6 (1986[1988]), pp. 243-58.

<sup>14</sup> The first hoard contains 10 coins of Shāpūr II, 7 of Ardashīr II, and 3 of Shāpūr III. It is now in the collection of the Sinkiang Uighur Autonomous Region Museum in Urumchi. It is published in Hsia Nai, "Hsin-chiang Tu-lu-fan tsui-chin ch'u-t'u te Po-ssu Sa-shan ch'ao yin-pi" 新疆吐魯番最近出土的波斯薩珊朝銀幣, *KK* 4 (1966), pp. 211-16. The second hoard contains four coins of Shāpūr II, five of Ardashīr II, and one of Shāpūr III. It is in the collection of the Chinese History Museum in Peking. It is published (with English abstract) in Hsia Nai, "Chung-kuo tsui-chin fa-hsien te Po-ssu Sa-shan ch'ao yin-pi" 中國最近發現的波斯薩珊朝銀幣, *Chung-kuo k'o-hsüeh-yüan k'ao-ku yen-chiu-so* 中國科學院考古研究所, ed., *K'ao-ku-hsüeh lun-wen chi* 考古學論文記 (Peking: K'o-hsüeh ch'u-pan she, 1961), pp. 118-21, 170-71, pl. 30; rpt. from

III, their burial dates can be no earlier than the years of his reign. With a few exceptions, these coins are in remarkably good condition and do not show a great deal of wear. The third hoard appears to be the largest, but unfortunately it fell into the hands of at least several private collectors before it could be studied or published. The collector Sung Chih-yung 宋志永 reports that this cache had about 100 coins minted during the reigns of the same three emperors as the other two hoards. Unfortunately, only poor rubbings of eleven coins have been published, but they corroborate the collector's claim that the hoard was composed entirely of the coins of Shāpūr II, Ardashīr II, and Shāpūr III.<sup>15</sup> Besides these three hoards, two other coins were found separately on the ground in the old city and have been published with photos.<sup>16</sup> Both are coins of Ardashīr II. These two random finds probably are from around the same time period as the hoards because of the presence of coins of Ardashīr II in all instances.

The later tomb finds fall into three categories according to their reliability as evidence. The coins that generally provide the most dependable data are the ones that I personally examined at the Turfan and Sinkiang Museums in China. Also in this category are three of the four Turfan tomb finds in the collection of the British Museum of which I obtained good photographs (see the illustrations appended to this article).<sup>17</sup> These twenty coins form more than half of the known discoveries from Turfan's tombs; they are listed and described fully in the appended table "Twenty Turfan-Tomb Silver-Coins Known to Be Held in Museums." Unfortunately, due to poor record-keeping, the whereabouts of almost all of the other silver coins from Turfan's tombs are unknown.<sup>18</sup>

*K'ao-ku hsueh-pao* 考古學報 2 (1957), pp. 49-60, pl. 1, which does not include an English abstract. The coins of Shāpūr II and Ardashīr II do not show any variation in type, but those of Shāpūr III come in two different types. All but two of the coins weigh 4.1 grams or higher. Although the types show little diversity, epigraphic and stylistic differences on the individual coins demonstrate that they were struck from different dies.

<sup>15</sup> Sung claims that there are about 50 coins of Shāpūr II, 40 of Ardashīr II, and 11 or 12 of Shāpūr III. These coins have weights similar to the other two hoards, averaging about 4.2 grams. Sung Chih-yung, "Po-ssu yin-pi tsai Hsin-chiang te yu i-t'ü chung-ta fa-hsien chui-chi 89 nien T'u-lu-fan ch'u-t'u te i p'i tsao-ch'i Po-ssu Sa-shan ch'ao yin-pi" 波斯銀幣在新疆的又一次重大發現追記89年吐魯番出土的一批早期薩珊朝銀幣, *Hsin-chiang ch'ien-pi* 新疆錢幣 2 (1996), pp. 36-39.

<sup>16</sup> Hsia, "Chung-kuo tsui-chin fa-hsien te Po-ssu Sa-shan ch'ao yin-pi," p. 127, pl. XXXI, nos. B 01-02.

<sup>17</sup> I owe thanks to Helen Wang of the British Museum Department of Coins and Medals for sending me the photographs. The fourth coin from Turfan in the British Museum (C33) is in fragments and missing from the collection.

<sup>18</sup> Some have claimed that various of these coins are kept in the Chinese History Museum in Peking, but upon examining their collection, I found only one of the above-mentioned hoards from Kao-ch'ang city. I also was told that the China Numismatic Museum in Peking might hold the missing coins, but I was unable to gain access to their collection.

Of the coins not in the collections of the Sinkiang, Turfan, and British Museums, three have published photographs of generally poor quality. These coins are numbers C20, C21, and C31, according to the numbering scheme used in the appended table "Fourteen Turfan-Tomb Silver-Coins That Author Was Unable to Locate," where they are described fully. The remaining eleven unexamined coins do not have published photographs, and all but one are known only from a table describing silver coins finds from Astana and Karakhoja that was published by the late Chinese archaeologist, Hsia Nai.<sup>19</sup> This evidence is of course the least reliable.

The distribution of rulers depicted on the coins is shown in table 1, below. All reigned during the second half of the Sasanian dynasty from the mid-fifth century onward. The majority of coins were minted during the reign of Khusrau II. From the perspective of Sasanian numismatic history, the preponderance of Khusrau II's coins is not unusual because mint output probably reached a peak during his exceptionally long reign, as discussed below. Since late-Sasanian and Arab-Sasanian coins give the year of minting, it is possible to look at the distribution of the coins according to mint date. This exercise gives us a rough idea of the periodization of the silver specie that came to Turfan.

Table 2 arranges the data according to the number of coins minted during a decade with the exception that the first and last entries are according to multiple decades. It demonstrates that most of the coins found in Turfan's tombs were minted beginning in the late-sixth century, reached their peak in the 610s and 620s, and then tapered off until they disappeared after the 670s. These coins represent about a hundred years of mint production.

Although these data enumerate the types of coin brought to Turfan, they cannot tell us the time period during which the coins actually reached Turfan and circulated there. The coins could have changed hands in Iran or other parts of Inner Asia for decades before being carried to Turfan. So the above can only roughly periodize silver coin circulation in Turfan. In the best of all possible worlds, the Turfan tomb finds would have provided an excellent

<sup>19</sup> Hsia, "Tsung-shu Chung-kuo ch'u-t'u," p. 110. In a note to the table, Hsia mentions that it was compiled from rubbings of coins, rather than photographs, that the Sinkiang Museum had sent him. The rubbings probably were not of high quality. Fortunately I was able to evaluate the value of Hsia's data because his table includes coins that I examined at the Sinkiang Museum. In comparing, I have found that his attributions of rulers are generally, but not always, correct. However, the mint dates that he provides are sometimes inaccurate and the mint places often are unreliable. With this in mind, in cases where I have not been able to examine the coins, the findings in this article uses only Hsia's data for rulers and, with reservations, for mint dates. The other unpublished coin that is not in Hsia's table is C33. It is missing from the collection of the British Museum.

method of determining when most of the specie circulated there because the coins were buried in tombs that often have dated documents or epitaphs. Ideally this would allow us to determine precisely when the coins were taken out of circulation to be placed with the dead. Moreover, a large enough sample of coins with burial dates would permit us to determine with some exactitude the periodization of silver coin circulation in Turfan.

Due to a variety of factors, however, the value of the data has diminished for more than a millennium, such that less than one-quarter of the coins have

Table 1. Distribution of Rulers on Silver Coins from Turfan Tombs

RULER	REIGN (AD)	COINS FOUND
Pērōz II	459-84	1
Zāmāsp	496-98	1
Khusrau I	531-79	2
Hormizd IV	579-90	1
imitation Hormizd IV		1
Khusrau II	590, 591-628	17
Empress Bōrān	630-31	1
Yazdgard III	632-51	3
Arab-Sasanian	minted 651- ca. 700	2
unclear	N/A	5

burial dates that can be determined to within a decade. The degradation of evidence was initially the work of grave robbers. They entered most, but not all, of the graves, stole valuables, and disrupted the contents of the tombs. Taking this into consideration, it is amazing that so many silver coins have survived. This is probably because many tomb robbers did not realize that coins were placed in the mouths of the corpses. Unfortunately, some of the thieves seem to have learned this secret. When Aurel Stein entered some of Astana's tombs, it was a grave robber who showed Stein how to break open

Table 2. Distribution of Mint Dates

DECADE(S) MINTED	COINS FOUND	% OF TOTAL
460-89	1	4
490-99	1	4
(hiatus)		
560-69	1	4
570-79	1	4
580-89	1	4
590-99	2	8
600-09	2	8
610-19	5	20
620-29	6	24
630-39	2	8
640-49	1	4
650-59	1	4
660-79	1	4
TOTALS	25	100

NOTE: Coin C7, possibly minted 619-28, is placed in 620s; C15, C16, C17, C29, C30, C31, C32, and C33 not included here because dates were indecipherable or estimated too broadly.

the jaw of a corpse to extract a coin.<sup>20</sup> In some cases the grave robbers also made it hard to determine burial dates by disturbing the documents in the tombs. Since tombs usually contained multiple family members who had died at different times, it often is necessary to associate a corpse with particular documents in order to ascertain its burial date. If the documents are disturbed or lost, the time of interment can no longer be determined precisely.

Twentieth-century excavators and museum personnel also are responsible for the degradation of the data. Stein, who found four Sasanian silver coins, did not date the three tombs where he found them. Chinese archaeologists also share part of the blame. The brief excavation reports on some of the tombs published in the 1960s and 1970s are generally too vague to be of much help.<sup>21</sup> A detailed excavation report for each tomb has yet to be published. However, two other sources exist that allow us partially to compensate for this deficiency. Hsia Nai's published information on the coins includes tomb numbers for the coins and initial attempts at dating burials.<sup>22</sup> However, his work is insufficient for two reasons. First, his article appeared before the collation and editing of tomb documents were complete, so his dating of burials sometimes does not take into consideration the evidence of the documents. Second, he commits the mistake of assuming that all occupants of a tomb were buried at the same time, so in cases of multiple interments, his dating is not reliable. Unfortunately, other scholars have accepted Hsia's burial data uncritically.<sup>23</sup> The other source helpful in dating burials is the ten-volume compilation of Turfan documents that has been published in China under the title *T'u-lu-fan ch'u-t'u wen-shu* 吐魯番出土文書 (*Documents Excavated at Turfan*).<sup>24</sup> The editors arranged

<sup>20</sup> Stein, *Innermost Asia* 2, p. 646.

<sup>21</sup> Hsin-chiang Wei-wu-erh tzu-chih-ch'ü po-wu-kuan, "T'u-lu-fan A-ssu-t'a-na pei ch'ü mu-tsang fa-ch'ueh chien-pao" 吐魯番阿斯塔那北區墓葬發掘簡報, *WW6* (1960), pp. 13-21; idem, "T'u-lu-fan hsien A-ssu-t'a-na Ha-la-ho-cho ku mu-ch'ün ch'ing-li chien-pao" 吐魯番縣阿斯塔那哈拉和卓古墓群清理簡報 *WW1* (1972), pp. 8-19; idem, "T'u-lu-fan A-ssu-t'a-na 363," pp. 7-12; idem, "T'u-lu-fan hsien A-ssu-t'a-na Ha-la-ho-cho ku mu-ch'ün fa-ch'ueh chien-pao (1963-1965)" 吐魯番縣阿斯塔那哈拉和卓古墓群發掘簡報 (1963-1965), *WW10* (1973) pp. 7-27; idem and Hsi-pei ta-hsüeh li-shih-hsi k'ao-ku chuan-yeh 西北大學歷史系考古專業, "1973 nien T'u-lu-fan A-ssu-t'a-na ku mu-ch'ün fa-ch'ueh chien-pao" 1973年吐魯番阿斯塔那古墓群發掘簡報 *WW7* (1975), pp. 8-26; and Hsin-chiang po-wu-kuan k'ao-ku-tui 新疆博物館考古隊, "T'u-lu-fan Ha-la-ho-cho ku mu-ch'ün fa-ch'ueh chien-pao" 吐魯番哈喇和卓古墓群發掘簡報, *WW6* (1978), pp. 1-14.

<sup>22</sup> Hsia, "Tsung-shu Chung-kuo ch'u-t'u," p. 110.

<sup>23</sup> Kuwayama Shōshin 桑山正進, "Tōhō ni okeru Sāsān shiki ginka no saikentō" 東方におけるサーサーン式銀貨の再検討, *THGH* 54 (1982), pp. 147-48. Thierry, "Sur les monnaies sasanides," pp. 89-96.

<sup>24</sup> Kuo-chia wen-wu ch'ü ku wen-hsien yen-chiu shih 國家文物局古文獻研究室, Hsin-chiang Wei-wu-erh tzu-chih-ch'ü po-wu-kuan, Wu-han ta-hsüeh li-shih hsi 武漢大學歷史系, eds., *T'u-lu-fan ch'u-t'u wen-shu* 吐魯番出土文書 (Peking: Wen-wu ch'u-p'an she, 1981-91; hereafter cited as *TCWS*).

the documents according to the tombs where they were found. Included is a short introduction to each tomb that usually provides some information on dating. Unfortunately, since the majority of tombs have multiple occupants, the information given is often too vague to date the burial of the particular tomb occupant who possessed the coins. The limited number of burial dates that we have were determined thanks to Hsia Nai and the editors of *Documents Excavated at Turfan*, but their work cannot take the place of a detailed excavation report.

The data also have been subject to one other type of degradation, namely, lax record keeping at museums. At the British Museum, where Stein's finds were deposited, one of the coins is missing. The Turfan Museum's only Sasanian coin does not have a catalogue number and the museum staff are not sure of its provenance, although they claim that it must have come from one of Astana's tombs. At the Sinkiang Museum the catalogue numbers of the coins excavated in 1959 and 1960, which should indicate the tomb where the excavation took place, now differ from those that Hsia previously reported.<sup>25</sup> In some cases I have been able to match coins to those described by Hsia (see appended table "Twenty Coins Known to Be Held in Museums").<sup>26</sup> Through this kind of detective work, I have been able to identify the correct catalog numbers – and thus the correct tombs – for some, but not all, of the coins excavated in 1959 and 1960.

Today only seven of the total of around thirty Sasanian and Arab-Sasanian coins that we have from Turfan's tombs have burials that can be dated to within a decade. These are listed chronologically according to burial date in table 3. They show a general pattern of silver coins circulating in Turfan throughout the seventh century and into the early-eighth century. The coins with less

<sup>25</sup> This is demonstrated by coins C8 and C11, which Hsia published with photos, but now have catalog numbers that differ from his. Museum staff were unable to explain this discrepancy. There were signs of problems with cataloging as early as 1966, when Hsia Nai published an article that briefly mentioned the number of Sasanian coin finds at Astana. At that time four coins were noted as being "temporarily missing"; Hsia, "Hsin-chiang T'u-lu-fan tsui-chin ch'u-t'u," p. 214.

<sup>26</sup> In these instances I am inclined to believe that Hsia's number is correct. This was corroborated when I spoke at the Sinkiang Museum to Wu Chen, who was the lead archaeologist at the Astana excavations. He said that he personally sent the correct data and rubbings for each coin to Hsia Nai. He is inclined to believe that any mix-ups occurred in the museum's cataloging department, which does not have a uniformly well-trained staff. Further corroboration that Hsia Nai's numbers are correct came when I looked up dubious catalog numbers in the original excavation reports that are on file at the Sinkiang Archaeological Institute. I found that the suspect catalog numbers now used by the museum often refer to nonexistent tombs or to artifacts that were not coins. I would like to thank the director of the Institute, Wang Binghua, for giving me access the excavation reports. I also am grateful to Ch'iu Ling who assisted me in using them.

precisely determined burial dates, not included in table 3, roughly confirm this distribution, but suggest that coins may have circulated in the late-sixth century until the mid-eighth. However, as demonstrated below, the documents from Turfan's tombs allow us to date more precisely the period of silver coin circulation in Turfan.

Table 3. *Astana and Karakhoja Silver Coins with Known Mint and Burial Dates*

COIN REF. #	COIN TYPE	MINT DATE	BURIAL DATE	YRS. FROM MINTING TO BURIAL
C1	Sasanian; Zāmāsp	499	604	105
C11	Sasanian; Yazdgard III	632	632-40	0-8
C4	Sasanian; Khusrau II	609	639	30
C13	Arab-Sasanian; Yazdgard III type	651	651-53	0-2
C9	Sasanian; empress Bōrān	632	672	40
C24	Sasanian; Khusrau II	619	689	70
C28	Sasanian; Khusrau II	622	ca. 706	84

## THE DOCUMENTS

Although the data from the coins are not as complete as we would like, we are fortunate that the tomb documents can help in periodizing silver coin circulation in Turfan. Many are dated and specifically mention "silver coins." Since the only silver coins that have been discovered in Turfan are Sasanian and Arab-Sasanian types, it is safe to assume that the vast majority, if not all, of the silver coins mentioned in these documents are of these two kinds. The documents – ledgers, private contracts, receipts, and government paperwork – are listed at the end of this article in the table titled "Dated Turfan Documents That Mention Silver Coins," which is based on a survey of the Turfan documents limited to those in *Documents Excavated at Turfan*. The survey did not cover unpublished Turfan documents or ones published in other places. The documents in the appended table also are restricted to those that are dated to a year and specify that the coins in question are silver. Many more documents merely mention "coins." Although in many instances "coins" certainly is shorthand for silver coins, this type has been excluded from the list to avoid

error.<sup>27</sup> Including such items would enlarge the table by two or three times.<sup>28</sup>

Most of the documents that mention silver coins were placed in tombs as waste paper that was cut and folded to make grave goods and clothing for the dead. As such, they represent a random sample of records from Turfan, and so we may assume that the surviving documents that mention silver coins roughly reflect the contemporary circulation of silver specie in Turfan.<sup>29</sup> However, the data probably are distorted in favor of the 660s and 670s due to the inclusion of documents D<sub>34</sub> through D<sub>41</sub>, each marked with an asterisk. Unlike the vast majority of records from the tombs of Turfan that were randomly left behind as waste paper, these contracts were intentionally rolled together and placed in the tomb of one moneylender. Valerie Hansen has demonstrated that these contracts probably represented unpaid debts that the deceased hoped to collect in the underworld courts of the afterlife.<sup>30</sup> They cannot be considered a random sample of the scrap paper that was circulating in Turfan in the sixth and seventh centuries, and they skew coin circulation data in favor of the 660s and 670s.

A distribution by decade of these dated documents and of dated coin burials is given in table 4, which demonstrates that coins began to circulate in Turfan in the 580s, when the Ch'ü 麴 dynasty's Kao-ch'ang kingdom (499–640) ruled the oasis. The peak of silver coin circulation appears to have been in the period from the 620s to the 650s. This straddles the transition from

<sup>27</sup> There are strong grounds for excluding these "shorthand" documents from the sample in table 3. References in the 6th and 7th-c. documents to "coins" usually indicated silver coins, and those of the 8th-c. indicated bronze. Proving that the coins in question refer to silver must be done on the basis of the value of goods and, more to the point, on when they were written. Since table 3 is meant to establish the chronological distribution of these documents, it would entail a logical fallacy to include documents that have been identified as members of the group partially on the basis of their periodization.

<sup>28</sup> References to most of these more questionable documents are included in Lu Hsiang-ch'ien 盧向前, "Kao-ch'ang Hsi-chou ssu-pai nien huo-pi kuan-hsi yen-pien shu-lüeh" 高昌西州四百年貨幣關係演變述略 in *Tun-huang Tu-tu-fan wen-shu lun-hao* 敦煌吐魯番文書論稿 (Nan-ch'ang: Chiang-hsi jen-min ch'u-pan she, 1992), pp. 232–50.

<sup>29</sup> The data in table 3 exhibit bias in favor of documents that are contracts. This is partially a result of the method of selecting evidence, because contracts specify the type of coin used in the transaction, probably to prevent one party from cheating another at payment time by giving coins of lesser value or demanding coins of greater worth. On the other hand, government records, which were written by busy (or lazy) bureaucrats and clerks, often use the shorthand designation "coin" for common transactions rather than writing "silver coin." Because of this tendency, many government documents have been excluded. However, it is my impression that the distribution over time of government documents mentioning probable silver coins roughly parallels the distribution of private contracts. Excluding most of the government documents does not, therefore, skew the data.

<sup>30</sup> Valerie Hansen, *Negotiating Life in Traditional China: How Ordinary People Used Contracts, 600–1400* (New Haven: Yale U.P., 1995), pp. 33–39, 229.

Ch'ü to T'ang rule that occurred in 640. Thereafter, silver coin usage tapered off to a point (after 710) for which we have no more evidence of silver coins in circulation.

Table 4 tells us when the coins circulated, but it does not allow us to deduce when silver coins were being imported to Turfan. They could have come to Turfan at a relatively early date and then remained in circulation for a while without fresh imports. Table 3, above, provides a glimpse of some periods when the coins were being imported. It lists the seven coins for which

Table 4. Dates (by Decades) of Coin-Mentioning Documents and Buried Sasanian or Arab-Sasanian Coins

DECADE	DOC.'S.	COINS	TOTALS
570–79	0	0	0
580–89	7	0	7
590–99	0	0	0
600–09	3	1	4
610–19	1	0	1
620–29	5	0	5
630–39	6	2	8
640–49	4	0	4
650–59	7	1	8
660–69	0 (5)	0	(5)
670–79	3 (6)	1	4 (7)
680–89	0	1	1
690–99	1	0	1
700–09	0	1	1
710–19	0	0	0

NOTE: Higher figs. in parentheses include documents intentionally placed in tomb of moneylender (see discussion, above).

we have firm minting and burial dates and determines the length of time that they were in circulation before burial. Coins C<sub>1</sub>, C<sub>4</sub>, C<sub>9</sub>, C<sub>24</sub>, and C<sub>28</sub> exhibit long periods of circulation that do not reveal dates of importation to Turfan: the coins could have been circulating for protracted intervals in other places in Iran, China, or Inner Asia before coming to rest in a tomb in Turfan. On the other hand, two coins, C<sub>11</sub> and C<sub>13</sub>, demonstrate short periods of circulation that are much more significant. They were buried in Turfan respectively in the 630s and 650s, which was fairly soon after being minted. This indicates that in the decades when they were buried, coins were being imported from Iran. Unfortunately the data are so limited that we cannot gain a complete picture of importation. We can only hope that a detailed excavation report is published in the future so that this type of analysis can be carried out more comprehensively.

## TURFAN'S COINS IN CONTEXT

Having established that the Sasanian and Arab-Sasanian silver coins circulated in Turfan from about 580 to 710, we can now turn to the question of their function, and the reasons for their appearance and eventual disappear-

ance. Since, as mentioned above, the presence of the coins in Turfan reflect an intersection of global, regional, and local factors, then it is important to place the finds at Turfan in a comparative context, using coins from other parts of Turkestan and the Chinese heartland. Most puzzling is the comparison with central China. There are no coins in central China that correspond with the finds at Turfan dating to the late-fourth century. And while more than eighty percent of the Sasanian specie found in central China was minted during the reign of Pērōz (459-484), only one of his coins has been found at Turfan. Finds dating from the late-sixth and seventh centuries are less problematic because at that time both Turfan and central China were dominated by coins of Khusrau II.<sup>31</sup>

Variations in coin distribution during the fourth and fifth centuries can be explained by political events and shifts in trade routes. As Thierry points out, the late-fourth century finds at Turfan correspond to the temporary unification of north China under the Former Ch'in dynasty (351-394) and its attempts to encourage international trade. In 376 the ruler of Former Ch'in, Fu Chien 苻堅, began to seek contact with the west. In 379 delegations from Shan-shan 鄯善, Turfan (Chü-shih 車師), Khotan (Yü-t'ien 于闐), Farghānah (Ta-yüan 大宛), Samarqand (K'ang-chü 康居), and India (T'ien-chu 天竺) arrived at court to present tribute.<sup>32</sup> Merchants of the west probably used this political opening to renew contacts with China. However, the opportunity for trade rapidly unraveled when political instability came to eastern Turkestan and north China. In 382 the kings of Shan-shan and Turfan personally came to court to ask the Ch'in to assist them in a conflict with Karashahr (Yen-ch'i 焉耆) and Kucha (Ch'iu-tz'u 龜茲). Lü Kuang 呂光 was dispatched to attack, and conquered Karashahr and Kucha by 385. However, Shan-shan and Turfan in Turkestan and the Ch'in in north China were imperiled in 385 when Lü Kuang abandoned his western conquests, seized the Ch'in capital at Liang-chou 涼州 (Kutsang 姑臧) in Kansu, and proclaimed himself king of the Later Liang. While Lü Kuang was busy consolidating his power in Kansu during 387 and 388, the combined forces of Kucha, Karashahr, and the Jou-jan 柔然 tribal confederation staged a retaliatory attack on Turfan.<sup>33</sup> The three early caches of coins at Turfan probably were emergency hoards buried during this conflict because throughout history it has been common to hide coins and other valuables dur-

ing warfare.<sup>34</sup> The coins in the hoards probably came to Turfan as part of efforts to open trade between the Near East and China in the 370s and 380s, but warfare and political instability in north China and eastern Turkestan brought a swift end to the opportunity for international commerce.

Kuwayama Shōshin 桑山正進 and Eugeny Zeimal' also have connected the Turfan hoards to Sasanian expansion in the east under Shāpūr II in the 350s and the rise of the "Kidarite Huns" on Iran's eastern borders later in the fourth century. To support this claim, Kuwayama cites the great number of coins of Shāpūr II and Shāpūr III found at Taxila in modern Pakistan and a hoard from Tépé Maranjān near Kabul, Afghanistan, that contains coins of the same three emperors as the Turfan hoards.<sup>35</sup> There may be merit to their arguments, but how the coins arrived in Pakistan and Afghanistan, whether through trade or Sasanian intervention, and the process by which they may have been transferred to Turfan remains a mystery. It may be impossible to explain these events adequately because the history of the period is poorly understood due to a paucity of surviving literary sources.<sup>36</sup> Nonetheless, it is clear that the importation of coins from the Near East to China was cut off late in the fourth and the early-fifth centuries owing to warfare and political instability in North China.

Trade revived again in the middle of the fifth century because of two factors. One was the reunification of north China under the Northern Wei dynasty (439-534). Political stability in North China created a demand for goods.<sup>37</sup> Like the Former Ch'in dynasty, the Wei aggressively sent out emissaries to the west seeking "tribute."<sup>38</sup> The other factor was a great quantity of

<sup>31</sup> Thierry, "Sur les monnaies sassanides," pp. 106, 109. On an "emergency" hoard, see Philip Grierson, *Numismatics* (London: Oxford U.P., 1975), p. 133. According to Grierson, a number of similar hoards in a locality generally is considered evidence of warfare.

<sup>32</sup> Kuwayama, "Tōhō ni okeru Sāsān," pp. 149-51. Eugeny V. Zeimal', "Eastern (Chinese) Turkestan on the Silk Road-First Millennium A.D. Numismatic Evidence," *Silk Road Art and Archaeology* 2 (1991-92), pp. 166-67. Long ago, Hsia Nai pointed out that Kao-ch'ang's city hoards are remarkably similar to the hoard from Tépé Maranjān; Hsia, "Chung-kuo tsui-chin fa hsien te Po-ssu Sa-shan ch'ao yin-pi," pp. 120-21. The Tépé Maranjān hoard consists of 326 coins of Shāpūr II, 28 of Ardashir II, and 14 of Shāpūr III. Also present are ten gold Kūshāno-Sasanian coins. See Raoul Curiel, "Le Trésor du Tépé Maranjān," in *Tresors monétaires d'Afghanistan* (Paris: Imprimerie Nationale, 1953), pp. 101-32. Although Taxila's coins are dominated by those of Shāpūr II and Shāpūr III, those of Ardashir II are not present, so the connection to the Turfan hoards seems more tenuous. On the Taxila coins, see John Marshall, *Taxila* (Varanasi: Bhartiya Publishing House, 1975) 2, pp. 790-91.

<sup>33</sup> A. D. H. Bivar is reluctant to construct a narrative of Shāpūr II's campaign in the east and the rise of the Kidarites; idem, "The History of Eastern Iran," in Ehsan Yarshater, ed., *The Cambridge History of Iran, Volume 3* (Cambridge: Cambridge U.P., 1983), pp. 211-13.

<sup>34</sup> Thierry, "Sur les monnaies sassanides," pp. 109-11.

<sup>35</sup> There is a detailed treatment of these events in Kuwayama, "Tōhō ni okeru Sāsān," pp.

<sup>31</sup> This comparison of finds at Turfan and in central China is based on Thierry, "Sur les monnaies sassanides," pp. 100, 107.

<sup>32</sup> Fang Hsüan-ling 房玄齡, *Chin shu* 晉書 (Peking: Chung-hua, 1982; hereafter cited as CS) 113, pp. 2900, 2904.; Thierry, "Sur les monnaies sassanides," pp. 108-9.

<sup>33</sup> CS 114, p. 2911; 122, pp. 3053-57.



coins that the Sasanian emperor Pērōz paid as salary, ransom, and tribute to the Hephthalite tribal confederation in western Turkestan. In 457 Pērōz employed Hephthalites to dethrone his brother Hormizd. Later relations between Pērōz and the Hephthalites soured and Pērōz attacked them in 469. Unfortunately for Pērōz, he was defeated and captured by the Hephthalites. His son Kavād was left as a hostage until Pērōz paid a large ransom. Thereafter the Sasanians paid tribute to Hephthalites for many years.<sup>39</sup> The Hephthalites evidently used this booty to buy goods from China, which would explain the relatively large number of Pērōz's coins that have been deposited there.

Although many scholars have made the connection between the large quantity of Pērōz's coins in China and the political situation on Iran's eastern borders, there has yet to be an explanation of why fifth-century Sasanian specie for the most part bypassed Turfan.<sup>40</sup> Only two fifth-century coins have been found in Turfan, one each of Pērōz (C22) and Zāmāsp (C1), but as mentioned previously, eighty percent of Sasanian coins in China proper were minted during the reign of Pērōz. Since we know that C1 was buried in 604, it may have arrived in Turfan long after the fall of the Hephthalites in the mid-sixth century. The answer to this problem probably lies in a shift of trade routes caused by political instability in Inner Asia. Turfan lies on the "middle route" that ran from western Turkestan to China through the desert on the southern edge of the T'ien-shan Mountains. According to the medieval Chinese geographer P'ei Chü 裴矩, from Farghānah in western Turkestan the usual itinerary crossed the Pamir mountains to Kashgar and then led to the oases of Kucha, Karashahr, and Turfan before entering the Ho-hsi corridor that communicated with China.<sup>41</sup> Besides Turfan, finds of Sasanian and Arab-Sasanian specie have been made at three other sites on this route – Karashahr, Kucha, and Ulugqat in the vicinity of Kashgar – but the vast majority of these coins date from the late-sixth and seventh centuries. Only one coin of Pērōz has been found at

Karashahr.<sup>42</sup> The presence of only two coins of Pērōz on the middle route indicates that it may have functioned feebly in the fifth-century or not at all, if they were carried there later.

On the other hand, larger numbers of Pērōz's coins have been found at Hsi-ning in Ch'ing-hai and Khotan.<sup>43</sup> These cities lie on two separate branches of the southern route, which usually is associated with Indian trade. According to P'ei Chü, travelers from India would head north until they reached the Hephthalites (I ta 挹怛) and Tukhāristān (T'u-huo-lo 吐火羅). Tukhāristān, also known as Bactria, on the middle reaches of the Oxus, was the Hephthalite base.<sup>44</sup> Given

<sup>42</sup> Random finds of silver Sasanian specie totaling three coins have been made at Kucha (2) and Karashahr (1), the latter minted during the reign of Pērōz; it is published in Han Hsiang 韓翔, "Yen-ch'i kuo-tu Yen-ch'i tu-tu fu chih-so yü Yen-ch'i chen-ch'eng Po-ko-ta-ch'in ku-ch'eng tiao-ch'a" 焉耆國都焉耆都督府治所與焉耆鎮城博格達沁古城調查, *WW* 4 (1982), p. 9, pl. 1, no. 4. Of the two coins discovered at Kucha, one is Arab-Sasanian and is published in Huang Wen-pi 黃文弼, *T'a-li-mu p'en-ti k'ao-ku chi* 塔里木盆地考古集 (Peking: K'o-hsüeh ch'u-pan she 1958), p. 110; and Hsia, "Chung-kuo tsui-chin fa-hsien te Po-ssu Sa-shan ch'ao yin-pi," p. 124, pl. 1, no. 6. The other is a coin of Khusrāu I minted in 559. It is published in N. V. Ivochkina, "Moneti pervoi vostochnoturkestanskoi ekspeditsii S. F. Ol'denburga," in Eugenii I. Lubo-Lesnichenko, ed., *Kultura i iskusstvo Indii i stran Dal'nego Vostoka* (Leningrad: Aurora, 1975), pp. 28, 33, pl. 1, #5. This find was overlooked in the studies by Hsia, "Tsung-shu Chung-kuo ch'u-t'u," Kuwayama, "Tōhō ni okeru Sāsān," and Thierry, "Sur les monnaies sassanides." A large hoard was found in the late 1950s in modern Wu-ch'ia 烏恰 county (Ulugqat), which is west of Kashgar. It was in an uninhabited area on a path that passes through the Pamir Mountains from the Farghānah Valley to Kashgar. The hoard evidently belonged to a merchant who was forced to hide it in an emergency. It has never been properly studied and I was unable to gain access to it at the Sinkiang Museum. The archaeologist who wrote the published description of the find was not a trained numismatist. He reported that the hoard was made up of silver coins and gold bars, and that there were 947 silver Sasanian and Arab-Sasanian coins that weighed a total of 3,800 grams. Many of the coins appear to have been countermarked. Also found were thirteen crudely manufactured gold bars with a total weight of 1,330 grams; Li Yü-ch'un 李迺春, "Hsin-chiang Wu-ch'ia hsien fa-hsien chin-t'iao ho ta pi Po-ssu yin-pi" 新疆烏恰縣發現金條和大批波斯銀幣, *KK* 9 (1959), pp. 482–83.

<sup>43</sup> The find at Khotan consisted of six or seven coins of Pērōz that had fused together into two clumps. They were found by treasure hunters, so their exact provenance is unknown; see A. R. Hoernle, "A Collection of Antiquities from Central Asia," *Journal of the Asiatic Society of Bengal* 68, Part I, Extra-Number 1 (1899), pp. viii–xxiv, 28, pl. 1, nos. 5, 19. This find was overlooked in the studies by Hsia, "Tsung-shu Chung-kuo ch'u-t'u," Kuwayama, "Tōhō ni okeru Sāsān," and Thierry, "Sur les monnaies sassanides." The hoard from Hsi-ning consists of 76 coins of Pērōz. It was found in a jar that included twenty Chinese bronze coins: *huo-ch'uan* 貨泉 of Wang Mang 王莽 (14–23 AD) and K'ai-yüan T'ung-pao 開元通寶 of the T'ang dynasty (after 621); see Hsia Nai, "Ch'ing-hai Hsi-ning ch'u-t'u te Po-ssu Sa-shan ch'ao yin-pi" 青海西寧出土的波斯薩珊朝銀幣, *K'ao-ku hsüeh-pao* 1 (1958), pp. 105–10, rpt. with English abstract in Chung-kuo k'o-hsüeh-yüan k'ao-ku yen-chiu-so 中國科學院考古研究所, ed., *K'ao-ku hsüeh lun-wen chi* 考古學論文記 (Peking: K'o-hsüeh ch'u-pan she, 1961), pp. 129–34, 171–72. The circumstances of the find are described in Wang Pi-k'ao 王丕考, "Ch'ing-hai Hsi-ning Po-ssu Sa-shan ch'ao yin-pi ch'u-t'u ch'ing-k'uang" 青海西寧波斯薩珊朝銀幣出土情況, *KK* 9 (1962), p. 492. Hsia is wrong to date the burial of the coins to the reign of Pērōz (457–83) because of the presence of the T'ang bronze coins that were minted two centuries later.

<sup>44</sup> *HIS* 221B, p. 6251; Chavannes, *Documents sur les Tou-kiue (Turcs) Occidentaux, recueillis et commentés suivi de notes additionnelles* (1900; rpt. Taipei: Ch'eng Wen Publishing, 1969), pp. 158–59.

153–55. Below, I present evidence to demonstrate that the Chinese court did not make a clear distinction between trade and tribute.

<sup>39</sup> Bivar, "The History of Eastern Iran," p. 214. Richard N. Frye, "The Political History of Iran under the Sasanians," in *Cambridge History of Iran* 3, pp. 147–48.

<sup>40</sup> Scholars who have associated Iranian-Hephthalite relations with Sasanian coins in China are Hsia, "Tsung-shu Chung-kuo ch'u-t'u," p. 97; Kuwayama, "Tōhō ni okeru Sāsān," pp. 152–56; and Thierry, "Sur les monnaies sassanides," pp. 117–19.

<sup>41</sup> This route is described in P'ei Chü's biographies: Li Yen-shou 李延壽, *Pei shih* 北史 (Peking: Chung-hua, 1974; hereafter cited as *PS*) 38, p. 1389; Wei Cheng 魏徵, *Sui shu* 隋書 (Peking: Chung-hua, 1973; hereafter cited as *SS*) 67, p. 1579; and Ou-yang Hsiu 歐陽修, *Hsin Tang shu* 新唐書 (Peking: Chung-hua, 1975; hereafter cited as *HIS*) 100, p. 3932. This route was in use until recent times; Owen Lattimore, *Inner Asian Frontiers of China* (Boston: Beacon Press, 1962 [1940]), pp. 172–73.

the amount of money the Hephthalites received from the Sasanians, it is not surprising that by far the greatest quantities of Pērōz's coins in western Turkestan have been discovered in Ṭukhāristān in recent times.<sup>45</sup> From Ṭukhāristān the southern route followed the Oxus River east to Wakhan (Hu-mi 護蜜) in modern northeastern Afghanistan, crossed the Pamir mountains to Tashkurgan (Ho-p'an-t'ō 喝盤陀), where it descended to the southern rim of the Tarim Basin and passed through Yarkand (Chu-chü-po 朱俱波), Khotan – where Pērōz's coins have been found – and finally Shan-shan.<sup>46</sup> From Shan-shan the more common route throughout history ran to Tun-huang and then into the Ho-hsi corridor to China.<sup>47</sup> However, a more southerly alternative existed via modern Ch'ing-hai. From Shan-shan travelers went through the Qaidam Basin to the Koko-nor Lake region – where coins of Pērōz were discovered at Hsi-ning – and thence to Lan-chou in Kansu and further into China. A number of Buddhist monks are known to have used this route in the fifth and sixth centuries.<sup>48</sup>

Given the preponderance of Pērōz's coins on the southern route and its alternative path through Ch'ing-hai, it must have been the itinerary of choice for merchants carrying Sasanian silver in the late-fifth and early-sixth centuries. Two factors probably were involved in merchants' decisions to use this route. One was that from the Hephthalite base in Ṭukhāristān, travel along the southern itinerary was more convenient. The tendency to use this route probably was intensified during a period when the Hephthalites controlled Khotan early in the sixth century.<sup>49</sup> The other factor was that the middle route was more susceptible to ongoing warfare among the Inner Asian nomads. Conflict among the Hephthalite, Jou-jan, and Kao-chü 高車 tribal groups probably made the middle silk route too dangerous at most times.<sup>50</sup> Instead, more trade apparently passed along the southern route, which was relatively sheltered from fighting by the desert of the Tarim Basin. In this way Turfan presumably declined as a trading center in this period.

Three political and economic events of global significance lie behind the revival of silver coin importation at Turfan late in the sixth century. First was

the Turkish consolidation of Inner Asia in the middle of the sixth century. Second was the reunification of China after a long period of division. Third was a growing output of silver coins in Sasanian Iran. The propitious confluence of these events was to bring prosperity to Turfan.

In the middle of the sixth century the Turks unified the tribes in Mongolia and conquered eastern Turkestan. In alliance with the Sasanians they took western Turkestan from the Hephthalites by 567.<sup>51</sup> The Turks had a keen interest in the silk trade and seem to have wanted to use their position straddling Inner Asia from North China to Persia to profit from commerce. Early on they ran into conflict with the Sasanians because of their desire to enter the Persian market.<sup>52</sup> The Turks also sought to make direct trade relations with Byzantium as a means of bypassing Iran.<sup>53</sup> The Turks' ability to bring political stability to Inner Asia and their desire to promote trade created conditions favorable to commerce.

As circumstances in Inner Asia were improving, so too did the situation in China. After a period of disunity in north China since the 530s, the Chou reunified the north in 577, and in 589 the Sui consolidated all of China for the first time in more than 300 years. Political unification in China created growing stability and undoubtedly induced an expanding demand for international commerce. It is not coincidental that in the 580s, the decade after the reunification of the north, we have evidence of the earliest surviving Turfan documents mentioning silver coins (D1-7) and in central China the first burial of sixth-century Sasanian coins.<sup>54</sup> Under the T'ang dynasty (618-907) there was a vogue for exotic goods of the West that probably pushed trade to higher levels.<sup>55</sup>

Political stability in China and Inner Asia undoubtedly influenced Turfan's

<sup>45</sup> Denis Sinor, "The Historical Role of the Turk Empire," in *Inner Asia and Its Contacts with Medieval Europe* (London: Variorum Reprints, 1977), p. 429; rpt. from *Journal of World History* 1 (1953), pp. 427-34.

<sup>46</sup> Denis Sinor, "The Establishment and Dissolution of the Türk Empire," in Denis Sinor, ed., *The Cambridge History of Early Inner Asia* (Cambridge: Cambridge U.P., 1990), p. 302. Peter B. Golden, *An Introduction to the History of the Turkic Peoples: Ethnogenesis and State Formation in Medieval and Early Modern Eurasia and the Middle East* (Wiesbaden: Otto Harrassowitz, 1992), p. 128.

<sup>49</sup> Sinor, "Historical Role of the Turk Empire," p. 431; Sinor, "Establishment and Dissolution of the Türk Empire," pp. 302-5.

<sup>54</sup> Two coins of Khusrāu I (r. 531-79), minted in 559 and 568, were buried in a tomb in Honan with an epitaph dated 584. Hsia Nai, "Ho-nan Shan hsien Sui mu ch'u-t'u te Po-ssu yin-pi" 河南陝縣隋墓出土的波斯銀幣, in Chung-kuo K'o-hsüeh-yüan k'ao-ku yen-chiu-so 中國科學院考古研究所, ed., *K'ao-ku-hsüeh lun-wen chi* 考古學論文記 (Peking: K'o-hsüeh ch'u-pan she, 1961), pp. 121-23, pl. 31, nos. A 1-2. Hsia, "Tsung-shu Chung-kuo ch'u-t'u," p. 92.

<sup>55</sup> Edward H. Schafer, *The Golden Peaches of Samarkand* (Berkeley: U. of California P., 1963), p. 28. Schafer points out that this vogue "was especially prevalent in the eighth-century, but no part of the T'ang era was free from it."

<sup>45</sup> Zeimal, "Circulation of Coins in Central Asia," p. 253.

<sup>46</sup> See biogs. of P'ei Chü: *PS* 38, p. 1389; *SS* 67, pp. 1579-80; and *HTS* 100, p. 3932. See Matsuda Hisao, "The T'ien-shan Range in Asian History," *Acta Asiatica* 41 (1981), pp. 5-8.

<sup>47</sup> *Ibid.*, pp. 10-11.

<sup>48</sup> *Ibid.*, pp. 20-21; Hsia, "Ch'ing-hai Hsi-ning ch'u-t'u te Po-ssu Sa-shan ch'ao yin-pi," pp. 109-10, and English abstract in 1961 edn.

<sup>49</sup> The Hephthalites took control of Khotan in 498. See Thierry, "Sur les monnaies sassanides," pp. 113-14.

<sup>50</sup> On this warfare see *ibid.*, pp. 112-14, 120.

rise to prominence as a trade entrepôt late in the sixth century, but Sasanian mint output provided an added impetus for coins to move east. There is strong evidence for an increase in mint production during the reign of Khusrau II (591–628). Hodge Malek points out that the “enormous number of drachms of Husrav [Khusrau] II found in hoards is indicative of what must have been a vast output of coins during his reign from many mints.”<sup>56</sup> Large quantities of his coinage remained in circulation for more than a hundred years after the Arab conquest of Iran.<sup>57</sup> Surviving coins from Turfan’s tombs also are dominated by those of Khusrau II. As shown in table 1, the silver coins minted during the decades when Khusrau II was on the throne (590s–620s) make up 60 percent of the total that was found in the tombs. The real upsurge in Sasanian coin production that headed to Turfan seems to have been during the 610s and 620s, which were the final two decades of Khusrau II’s rule. The coins minted during these twenty years represent 44 percent of the tomb finds. Although it is not clear where the silver came from that supplied the increased output, it may have been new mines or booty in the wars with Byzantium.<sup>58</sup> The increasing supply of silver would have made it more profitable for the Persians to export this precious metal in exchange for such goods as Chinese silk, and thus probably accelerated the flow of silver toward China.

Until the Tang conquest of Kao-ch’ang in 640, there is strong evidence that silver coins continued to flow to Turfan because of the intervention of the Turks and other nomadic tribes. These tribes had a strong incentive to see that trade continued to be funneled through Turfan because they used it as a choke point to regulate and profit from the international commerce that was passing between Iran and China. The first aspect of the evidence is that while the Ch’ü family ruled the Kao-ch’ang kingdom of Turfan, they considered themselves

<sup>56</sup> Hodge Mehdi Malek, “Review Article: A Survey of Research on Sasanian Numismatics,” *The Numismatic Chronicle* 153 (1993), pp. 237–38. In a personal communication, Michael Alram notes that “the evidence that during Khusrau II’s reign mint output reached its ultimate height is clearly demonstrated by the coins and hoards.”

<sup>57</sup> See for example two Syrian hoards that were published in 1983 in Ryka Gyselen and Ludvik Kalus, *Deux trésors monétaires des premiers temps de l’Islam* (Paris: Bibliothèque Nationale, 1983). These hoards are composed of Islamic and Sasanian coins. Of the Sasanian specie in the hoards, coins of Khusrau II made up more than eighty percent of the total (p. 62).

<sup>58</sup> On the Sasanian-Byzantine wars, see Frye, “Political History of Iran,” p. 167. Adon Gordus’ data on gold impurities in Sasanian silver coins present strong evidence for new supplies of silver during Khusrau II’s reign. Each silver mine tended to have a relatively constant gold-silver ratio. Prior to Khusrau II, gold impurity levels usually ranged from 0.4–1.0%, but during Khusrau II’s reign lower levels of gold became more common. See Gordus, “Non-Destructive Analysis,” pp. 143, 146–47. The greater variation in gold impurity levels at the time of Khusrau II indicates the presence of new sources of silver. Most probably, the silver of higher purity was coming from either new mines or Byzantium.

to be vassals of the Turks or other nomadic tribes. The ruler of Kao-ch’ang around the time when Sasanian coins begin to appear, Ch’ü Po-ya 麴伯雅, had a grandmother who was a Turk. This would indicate that the Ch’ü family had established marriage alliances with important Turkish leaders. In 590 Ch’ü Po-ya’s father Ch’ü Chien 麴堅 came into conflict with his Turkish overlords. In that year the Turks captured the kingdom, evidently killed Ch’ü Chien, and placed Ch’ü Po-ya on the throne.<sup>59</sup> The sources do not describe the cause of the conflict, but the Turks may have launched a punitive expedition after Ch’ü Chien refused to do their bidding. The incident at least demonstrates that the Turks had ultimate power over the affairs of the Kao-ch’ang kingdom.

There also is evidence that Turks and other nomadic peoples were deeply involved in Turfan’s international trade. The Chinese sources report that during the latter part of the Sui dynasty (589–618) Ch’ü Po-ya was a primary vassal of the T’ieh-le 鐵勒 tribe.<sup>60</sup> The T’ieh-le stationed an “official” in Kao-ch’ang who taxed the merchants passing through Turfan and sent the proceeds to tribal leaders. We are told that Ch’ü Po-ya feared the T’ieh-le and did not dare alter the arrangement.<sup>61</sup> The T’ieh-le seem to have had a strong interest in profiting from the transit trade through Turfan and probably sought to channel it through there. It also is probable that the Turks had similar arrangements before and after the interregnum of T’ieh-le rule at Turfan because contemporary documents show a number of Turkish tribal leaders and functionaries staying at Turfan.<sup>62</sup>

Under Ch’ü Po-ya’s son, Ch’ü Wen-t’ai 麴文泰, who succeeded his father in 619, Kao-ch’ang and its nomadic overlords seem to have gained a

<sup>59</sup> The sources do not specify how Ch’ü Chien was killed, but the Turks most likely dispatched him in battle or put him to death after their victory. Elements of Kao-ch’ang’s population seem to have been unhappy with Turkish overlordship because 2,000 people are said to have migrated to Chinese territory after the capture of Kao-ch’ang. *PS* 97, p. 3215; *SS* 83, p. 1847; Tu Yu 杜佑 (Wang Wen-chin 王文錦 et al., eds.) *Tung tien* 通典 (Peking: Chung-hua, 1988; hereafter cited as *TT*) 191, p. 5205.

<sup>60</sup> In the past scholars associated this name with the Tälös tribe of the Orkhon inscriptions solely on the basis of phonological correspondence, but historical evidence has made this association appear to be untenable. See Golden, *History of the Turkic Peoples*, pp. 93–95. The T’ieh-le were independent of the Western Turks from around 605 until some time before 620. The T’ieh-le overthrew Ch’ü-lo 處羅 Qaghan (*k’o-han* 可汗) of the Western Turks in 605 (*SS* 84, p. 1877). T’ung 統 Yabghu (*yeh-hu* 葉護) Qaghan regained control of the T’ieh-le at some time before he sent an embassy to the Chinese court in 620. See Liu Hsiü 劉向 et al., *Chiu Tang shu* 舊唐書 (Peking: Chung-hua, 1975; hereafter cited as *CTS*) 194B, p. 5181; *HTS* 215B, p. 6056; Chavannes, *Documents*, pp. 24, 52.

<sup>61</sup> *PS* 97, p. 3216; *SS* 83, p. 1848.

<sup>62</sup> See Chiang Po-ch’in 姜伯勤, “Kao-ch’ang Ch’ü-ch’ao yü tung hsi T’u-chüeh T’u-lu-fan suo ch’ü k’o-kuan wen-shu yen-chiu” 高昌麴朝與東西突厥吐魯番所出客館文書研究, in Pei-ching ta-hsüeh Chung-kuo chung-ku-shih yen-chiu chung-hsin 北京大學中國中古史研究中心, ed.,

stranglehold over this international trade. The T'ang histories report that all "tribute missions" had to pass through Kao-ch'ang. After Ch'ü Wen-t'ai came to power, these "missions" are said to have been either "entirely" or "greatly cut off and plundered."<sup>63</sup> Another source makes clear that "tribute" actually refers to goods that were carried by merchants. This source is a memorial of Wei Cheng 魏徵 that was written after the T'ang conquest of Kao-ch'ang in 640. It states that "When your majesty [emperor T'ai-tsung] began to rule Ail under Heaven [in 627], the king and queen of Kao-ch'ang were the first to come to the court to pay their respects. A few months later the *western merchants* (*shang-hu* 商胡) had their *tribute* (*kung-hsien* 貢獻) blockaded by them [Kao-ch'ang] ..."<sup>64</sup> This state of affairs apparently remained in effect for the next thirteen years until the T'ang conquered Kao-ch'ang. In the rhetoric of a Chinese court, trade goods were equated with tribute. It also is likely that Kao-ch'ang's ruler did not blockade trade, but rather monopolized it or taxed it highly to increase his profits. If he had blockaded trade, merchants would have stopped coming to Kao-ch'ang and the supply of silver coins would have dried up. On the contrary table 4 demonstrates that in the 620s and 630s there was an upsurge in silver coin burials and documents mentioning silver coins. Kao-ch'ang seems to have profited greatly from its control of the trade. More generally, Kao-ch'ang probably also benefited in the 620s and 630s from the T'ang's reunification of China in 618 and a resulting growth in the volume of trade. The T'ang court probably resented the extra cost that Kao-ch'ang's monopoly was adding to goods. Kao-ch'ang's profits from this trade seem to have been enormous. When the famous Buddhist pilgrim Hsüan-tsang 玄奘 came to Turfan in 630, Ch'ü Wen-t'ai sent him off with gifts that included 100 *liang* (approximately 4 kilograms) of gold and 30,000 silver coins.<sup>65</sup>

There also is evidence that Ch'ü Wen-t'ai was working with the Western Turks to protect this monopoly. In 632 Karashahr sent a mission to the T'ang court asking for help in establishing an alternative route through the desert

that apparently would have bypassed Kao-ch'ang. This angered Ch'ü Wen-t'ai. He and his ally, I-p'i Shad (I-p'i *she* 乙毗設) of the Western Turks, attacked Karashahr and sacked its three cities.<sup>66</sup> This seems to have preserved Kao-ch'ang's monopoly. The incident also demonstrates how closely this trade was tied to the cooperation of the Western Turks. By 640 Kao-ch'ang was dealing with Yü-ku Shad 欲谷設 also of the Western Turks. The sources tell us that Yü-ku established a garrison north of the T'ien-shan Mountains that was meant to monitor Turfan. Ch'ü Wen-t'ai gave Yü-ku money and silk, and the two parties had a mutual assistance pact. The Turkish garrison and the Kao-ch'ang kingdom are said to have communicated regularly.<sup>67</sup> The above evidence demonstrates that the Western Turks monitored the trade going through Kao-ch'ang and carried out coercive actions against parties that endangered their profits. This seems to have been a key factor in enhancing the supply of coins in Turfan up to the T'ang conquest in 640.

#### THE NATURE OF TURFAN'S TRANSIT TRADE AND ITS RELATION TO SILVER-COIN CIRCULATION

Having established why international trade flourished in Turfan early in the seventh century, we still need to understand how it was carried out and how silver coins came to circulate in Turfan. Remarkable fragments of documents that have survived in Turfan's tombs help us to solve some of these problems. An undated Sogdian language contract for the sale of a female slave from Samarqand mentions that the woman was purchased for "120 very pure struck Persian [silver] dirhems."<sup>68</sup> This contract establishes that Sogdian merchants were involved in transactions at Turfan using Sasanian coins and Sogdian slaves were one item that they traded. More extensive information about the situation in the Kao-ch'ang kingdom can be gleaned from a Chinese language record of "scale fees" 秤價錢, which traders involved in a transaction paid when merchandise was weighed on official scales.<sup>69</sup> Chinese scholars ar-

*Tun-huang Tu-lu-fan wen-hsien yen-chiu lun-chi* 敦煌吐魯番文獻研究論集 (Peking: Pei-ching ta-hsüeh ch'u-pan she, 1990) 5, pp. 33-51; and Jonathan Karam Skaff, "Straddling Steppe and Sown: Tang China's Relations with the Nomads of Inner Asia (640-756)" (Ph.D. diss., U. of Michigan, 1998), pp. 39-62.

<sup>63</sup> *CIS* 198, p. 5294; *HTS* 221A, p. 6221; Chavannes, *Documents*, p. 104. *HTS* reads "entirely," while *CIS* has "greatly."

<sup>64</sup> *CIS* 198, p. 5296; *HTS* 221B, p. 6222; Chavannes, *Documents*, p. 107. My translation (emphasis added) is based on the *CIS* version of the memorial, which is earlier and more reliable than that in *HTS*, the basis of Chavannes' translation.

<sup>65</sup> Hui Li 慧立 and Yen Ts'ung 彥棕, *Ta tz'u-en ssu san-tsang fa-shih chuan* 大慈恩寺三藏法師傳 (Peking: Chung-hua, 1983) 1, p. 21. Samuel Beal, *The Life of Hiuen-tsang* (1911; rpt. San Francisco: Chinese Materials Center, 1974), p. 30.

<sup>66</sup> *CIS* 198, pp. 5294, 5301; *HTS* 221A, p. 6221; 221B, p. 6229; Chavannes, *Documents*, pp. 104, 111.

<sup>67</sup> *CIS* 198, p. 5296; *HTS* 221B, p. 6223; Chavannes, *Documents*, p. 109. The garrison was at Qaghan Stupa City (*k'o-han fu-t'u ch'eng* 可汗浮圖城), which, these sources tell us, became T'ing prefecture (T'ing-chou 庭州) and then Pei-t'ing 北庭 after the T'ang conquest of the northwest. It was located north of the T'ien-shan Mountains at an oasis in the grasslands of the southern Jungarian Basin. Later during Uighur rule, it was known as Beshbaliq. Today the ruined city is about 125 kilometers east of Urumchi in Chi-mu-sa-erh county.

<sup>68</sup> The relevant part of the document is translated in Richard N. Frye, "Sasanian-Central Asian Connections," in Amir Harrack, ed., *Contacts between Cultures, Volume 1, West Asia and North Africa* (Lousiston, NY: Edwin Mellen Press, 1992), p. 272.

<sup>69</sup> 73TAM 514:2/1 to 2/11 in *TCWS* 3, pp. 318-25.

gue that the scale fee was a tax on merchants at Kao-ch'ang because the document mentions that the coins were deposited in the royal treasury (Nei-tsang 內藏).<sup>70</sup> The document is undated, but it seems to be from the early seventh-century.<sup>71</sup> It lists bulk transactions between different individuals and notes a tax that was extracted on each exchange in "coins."

The five major items that we know to have been traded on multiple occasions are spices 香, gold 金, silver 銀, ammonium chloride (*nao-sha* 鹵[鹽]沙 [砂]), and silk thread 糸 (絲). Items traded on only one occasion are brass 鑰石, medicine 藥 (藥), copper 同 (銅), turmeric root 鬱金根, and muscovado sugar 石蜜.<sup>72</sup> The various transactions are recorded in table 5.

The type of spice is not specified in any of the transactions, but we can be sure that more than one kind was traded. Spice transactions T<sub>5</sub>, T<sub>6</sub>, and T<sub>8</sub> are all taxed at a rate of around one coin per every 40 or 50 *chin*. On the other hand, the spice in transaction T<sub>9</sub> was taxed at the much higher levy of one coin per four *chin*. This type of spice must have been very expensive, because its tax rate by weight is only about one-quarter of that of silver in transactions T<sub>16</sub>, T<sub>17</sub>, T<sub>18</sub>, and T<sub>21</sub>.<sup>73</sup> It is hard to say exactly what these spices were.

<sup>70</sup> For studies of this document, see Chu Lei 朱雷, "Ch'ü shih Kao-ch'ang wang-kuo te 'ch'eng-chia ch'ien' Ch'ü-ch'ao shui-chih ling shih" 魏氏高昌王國的稱價錢魏朝稅制零拾, *Wei Chin Nan-Pei-ch'ao Sui Tang shih tzu-liao* 魏晉南北朝隋唐史資料 4 (1982), pp. 17-18, 23; Lu K'ai-wan 盧開萬, "Shih-lun Ch'ü shih Kao-ch'ang shih-ch'i te fu-i chih-tu" 試論魏氏高昌時期的賦役制度, in T'ang Chang-ju 房長儒, ed., *Tun-huang Fu-lu-fan wen-shu ch'u-t'an* 敦煌吐魯番文書初探 (Wu-han: Wu-han ta-hsüeh ch'u-pan she, 1983), pp. 93-94; Cheng Hsüeh-meng 鄭學稼, "Shih-liu-kuo chih Ch'ü shih wang-ch'ao shih-ch'i Kao-ch'ang shih-yung yin-ch'ien te ch'ing-k'uang yen-chiu" 十六國至魏氏王朝時期高昌使用銀錢的情況研究, in Han Kuo-p'an 韓國磐, ed., *Tun-huang Fu-lu-fan ch'u-t'u ching-chi wen-shu yen-chiu* 敦煌吐魯番出土經濟文書研究 (Hsia-men: Hsia-men ta-hsüeh ch'u-pan she, 1986), pp. 307-10; and Hsieh Ch'ung-kuang 謝重光, "Ch'ü shih Kao-ch'ang fu-i chih-tu k'ao-pien" 魏氏高昌賦役制度考辨 *Pei-ching shih-fan ta-hsüeh hsüeh-pao* 北京師範大學學報 1 (1989), p. 88. Chu Lei's article is the most thorough and explains the philological problems involved in reading the document.

<sup>71</sup> Chu Lei proposes this dating because the document has characteristics of the Kao-ch'ang period and contains the name of an individual who also appears in a separate document dated 619. The individual, Chü Pu-lü-to 車不呂多, appears in the document of 619 as Chü Pu-lu-to 車不六多 (60 TAM 331:12/1, 12/8, 12/6, 12/3 in *TCWS* 3, p. 111). The *lü* and *lu* ideograms in the two names are nearly phonological matches in modern Chinese, but graphically are not related. Chu Lei argues that it is likely the same person. Chu, "Ch'ü shih Kao-ch'ang wang-kuo te 'ch'eng-chia ch'ien,'" p. 18.

<sup>72</sup> Muscovado sugar was a raw, hard-grained sugar imported from Persia and India. See Christian Daniels, "Agro-industries: Sugarcane Technology," in Joseph Needham, ed., *Science and Civilization in China, Volume 6: Biology and Biological Technology, Part III, Agro-industries and Forestry* (Cambridge: Cambridge U. P., 1996), p. 374.

<sup>73</sup> I have not been able to find research on the weight standards of the Kao-ch'ang kingdom. In contemporary T'ang China one *chin* weighed from about 656 to 672 grams depending on the time and place. However, the Northern Wei dynasty (386-534), which ruled northern China when the Kao-ch'ang kingdom was founded, had a standard of about 480 grams per *chin*. The Eastern Wei (534-550) and Northern Ch'i (550-77) dynasties adhered to this lower standard. See Kuo Cheng-chung 郭正忠, *San chih shih-ssu shih-chi Chung-kuo te ch'üan-heng tu-liang* 三至十四世紀中國的權衡度量 (Peking: Chung-kuo she-hui k'o-hsüeh ch'u-pan she, 1993), pp. 117, 201.

Table 5. Goods Traded in Seventh-century Turfan

"Rate per coin" is "Quantity" divided by no. of tax coins (where known).

KEY: c = chin; l = liang

REF. #	GOODS	QNTY.	TAX in coins	RATE per coin	SELLER SURNAME	BUYER SURNAME	MO. lun.	REF.: sect./line
T <sub>1</sub>	spice	572 c	?		Ti	?	1	1/4
T <sub>2</sub>	spice	252 c	?		K'ang	K'ang	1	1/12
T <sub>3</sub>	spice	362 c	?		?	K'ang	3	1/25
T <sub>4</sub>	spice	800 c	?		?	?	4	1/34
T <sub>5</sub>	spice	172 c	4	43 c	?	Ho	6	1/42
T <sub>6</sub>	spice	92 c	2	46 c	?	K'ang	8	1/51
T <sub>7</sub>	spice	650-c	?		K'ang	K'ang	12	3/1-2
T <sub>8</sub>	spice	52 c	1	52 c	?	?	12	3/3
T <sub>9</sub>	spice	33 c	8	4 c	An	An	12	4/1-2
T <sub>10</sub>	gold	9.5 l	?		Ti	?	1	1/2
T <sub>11</sub>	gold	10 l	?		?	K'ang	1	1/6
T <sub>12</sub>	gold	8.5 l	?		A	Kung-ch'in	20r3	1/19
T <sub>13</sub>	gold	9 l	2	4.5 l	Ts'ao	Ho	3	1/24
T <sub>14</sub>	gold	4 l	?		K'ang	Chü	8	1/50
T <sub>15</sub>	gold	?	4		K'ang	Ts'ao	11	2/3-4
T <sub>16</sub>	silver	2 c	2	1 c	Ts'ao	Ho	1	1/1
T <sub>17</sub>	silver	2 c, 5 l	2	1.2 c	Ts'ao	K'ang	1	1/1-2
T <sub>18</sub>	silver	5 c, 2 l	5	1 c	Ho	An	1	1/3-4
T <sub>19</sub>	silver	8 c, 1 l	?		Ti	A	20r3	1/18
T <sub>20</sub>	silver	2 c, 1 l	?		K'ang	Ho	4	1/28
T <sub>21</sub>	silver	2 c	2	1 c	?	Ho	4	1/33
T <sub>22</sub>	amm. chl.	172 c	?		An	K'ang	1	1/11
T <sub>23</sub>	amm. chl.	50 c	?		Ts'ao	An	1	1/13
T <sub>24</sub>	amm. chl.	241 c	?		?	K'ang	3	1/25
T <sub>25</sub>	amm. chl.	11 c	?		Pai	K'ang	3	1/26
T <sub>26</sub>	amm. chl.	251 c	6	41.8 c	K'ang	Shih	6	1/41
T <sub>27</sub>	amm. chl.	201 c	?		K'ang	K'ang	12	3/1-2
T <sub>28</sub>	silk thrd.	50 c	?		?	K'ang	1	1/6
T <sub>29</sub>	silk thrd.	10 c	1	10 c	K'ang	K'ang	4	1/29
T <sub>30</sub>	silk thrd.	80 c	8	10 c	Ho	Pai?	4	1/35
T <sub>31</sub>	silk thrd.	60 c	3	20 c	Chü	Pai	5	1/37
T <sub>32</sub>	silk thrd.?	1090 c	1.5		Chü	Pai?	5	1/37-8
T <sub>33</sub>	brass	30-c	?		Ti	?	1	1/4
T <sub>34</sub>	medicine	144 c	?		K'ang	Ning	1	1/5
T <sub>35</sub>	copper	41 c	?		Ts'ao	An	1	1/13
T <sub>36</sub>	turmeric	87 c	1	87 c	K'ang	Chü	3	1/23
T <sub>37</sub>	musc. sugar	31 c	?		?	?	4	1/34

They could have had a wider variety of uses than the ones we normally attribute to spices because in East Asia "there was little clear-cut distinction among drugs, spices, perfumes and incenses."<sup>74</sup>

The mineral ammonium chloride is probably the most unexpected trade item because we normally think that international trade in this period involved exotic luxuries. Although it is not an exotic good, ammonium chloride was a luxury because the well-off ultimately purchased it either directly as a medicine or indirectly in gold and silver goods where it was used as a flux for soldering. It was produced in Inner Asia and especially in the Tarim Basin oasis of Kucha for export to China.<sup>75</sup>

Gold and silver are metals that were known to be imported by the T'ang.<sup>76</sup> The scale-fee document does not specify whether the gold and silver were exchanged as bullion or specie. There is evidence from one late-seventh-century hoard, which was found west of Kashgar at Ulugqat, that merchants from Transoxiana may have carried the silver in the form of coins and the gold in bars.<sup>77</sup> If this hoard is typical of those that were carried by merchants from Transoxiana to Turfan, it may indicate customary forms in which the precious metals were traded. However, gold also may have been commonly transported as specie because, as was mentioned in the introduction, Byzantine and imitation Byzantine gold coins have been found in Turfan's tombs.<sup>78</sup>

Although the scale-fee document only refers to exactions in "coins," it appears that silver coins were the medium of payment. Gold or bronze coins were less common at Kao-ch'ang. Gold Byzantine and bronze Kao-ch'ang coins have been found in some of Turfan's tombs, but they are relatively few in number in comparison to Sasanian silver.<sup>79</sup> Furthermore, the value of bronze coins

<sup>74</sup> Schafer, *Golden Peaches*, p. 155.

<sup>75</sup> Schafer describes the production areas of ammonium chloride (*sal ammoniac*) and its uses. Its status as a luxury good is attested by the fact that during the T'ang dynasty, Kucha (An-hsi protectorate) presented it to court as local tribute (Schafer, *Golden Peaches*, p. 218; *TT6*, p. 118). On local tribute see Edward H. Schafer and B. E. Wallacker, "Local Tribute Products of the T'ang Dynasty," *Journal of Oriental Studies* 4 (1957-58), pp. 213-48.

<sup>76</sup> See Schafer, *Golden Peaches*, pp. 253-4, 256.

<sup>77</sup> See n. 42.

<sup>78</sup> Their source is a mystery; Thierry and Morrisson, "Sur les monnaies byzantines."

<sup>79</sup> On gold coins, see n. 1. Three native bronze coins of Ch'ü-dynasty Kao-ch'ang were discovered this century. All were inscribed Kao-ch'ang Chi-li 高昌吉利 on the obverse. One was found in the ruins of Kao-ch'ang city; Huang Wen-pi 黃文弼, *Tu-lu-fan k'ao-ku chi* 吐魯番考古集, K'ao-ku-hsieh t'e-k'an 3 (Peking: Chung-kuo k'o-hsieh yüan, k'ao-ku yen-chiu-so, 1954), p. 49, pl. 52, no. 57. Another was discovered in a tomb at Astana with an inscription dated 642; Hsin-chiang Wei-wu-erh tzu-chih-ch'ü po-wu-kuan, "1973 nien Tu-lu-fan A-ssu-t'a-na ku mu-ch'ün," p. 17, pl. 11. A third has been identified in the collection of the Lu-shun Museum; see Zeimal, "Eastern (Chinese) Turkestan on the Silk Road," p. 160. Huang Wen-pi believed that the Kao-ch'ang Chi-li coin dated from the later Uighur Kao-ch'ang kingdom, but the evidence of the find demonstrates that the coins were minted in the early 600s, during the Ch'ü Kao-ch'ang dynasty.

is too low to make them a plausible candidate for the medium of payment on the luxury goods in the document. Also since gold coins, unlike silver coins, are not mentioned specifically in Turfan documents, this is further evidence of their relative paucity. There seems to be little question that the coins in the document refer to silver coins and most probably Sasanian drachms. Assuming the coins were Sasanian drachms, which weigh about four grams, the scale fee on silver would have been very reasonable at less than one percent.<sup>80</sup>

A surprise from the document is the relative paucity of silk transactions. Only four out of the thirty-seven sales that are listed in the table involve silk thread (T28-32), and none involves silk cloth. We would expect silk to have held a more dominant position on the "Silk Road." The answer to the problem lies in the fact that silk cloth, unlike silk thread, was sold by units of length and not weight. The documents also show that the silk thread market mainly was seasonal with the peak in production coming in the late-fourth and fifth lunar months. This is in accordance with usual practice.<sup>81</sup> Since there was no need to weigh silk cloth when making a sale, it was not a type of merchandise that would have been entered on the scale-fee ledger. Consequently, it is apparent that this document can only help us learn about goods from long distance trade that were sold by weight.

Another problem with the document is that every transaction mentions only the item being sold by weight and not the medium of exchange being used to complete the sale. Perhaps silver coins were used to make the purchases because the tax was levied in them.<sup>82</sup> Another possible candidate as purchasing medium is silk from China. We can suppose that the gold, silver, ammonium chloride, possibly spices, and other goods probably were headed for China in exchange for silk being transported westward.

A remarkable feature of the document is the dominance of merchants from Sogdia. As demonstrated below in table 6, more than eighty percent of individuals mentioned in the document were of Sogdian origin. The remainder include one Turk, six eastern Turkestanis, and one of unknown back-

<sup>80</sup> Although we do not know Kao-ch'ang's weight standards, if its *chin* was nearly that of the Northern Wei's at 480 grams (see n. 73), a tax of one Sasanian drachm—weighing about four grams—per *chin* of silver would have been a rate of less than one percent.

<sup>81</sup> The problems relating to the silk in the document are explained in Wu Min 武敏, "Ku-tai Kao-ch'ang ti-ch'ü te ts'an-ssu yü fang-chih" 古代高昌地區的蠶絲與紡織, in Yin Ch'ing 殷晴, ed., *Hsin-chiang ching-chi k'ai-fa shih yen-chiu* 新疆經濟開發史研究 (Urumchi: Hsin-chiang jen-min ch'u-pan she, 1995) 2, pp. 141-42.

<sup>82</sup> This may have been the case even in transactions involving silver bars. A possessor of bullion who wants cash has to sell it for a market's standard form of money, and in the case of Turfan this was silver coins (Michael Bates, personal communication).

ground.<sup>83</sup> Of the Sogdians, Samarqand's dominance is striking, especially if we consider that Kabūdhanjakath and Kushānīyah were near Samarqand and sometimes politically attached to it.<sup>84</sup>

Although Sogdian traders were numerically dominant, only one of them, Ho Li 何力 from Kushānīyah (Samarqand), was involved in more than one

Table 6. *Surnames of Merchants in Scale-Fee Document*

SURNAME	ORIGIN	NUMBER	PERCENTAGE
An 安	Bukhārā	6	12
Ts'ao 曹	Kabūdhanjakath (Samarqand)	7	14
Ho 何	Kushānīyah (Samarqand)	8	17
K'ang 康	Samarqand	19	39
Shih 石	Shāsh	1	2
Total Sogdia	.....	41	84%
Pai 白	Kucha	2	4
Ti 翟	Kao-chū peoples	2	4
Chū 車	Chū-shih peoples (Turfan)	1	2
Ning 寧	Turfan Chinese	1	2
Total E. Turkestan	.....	6	12%
A 阿	Unknown	1	2
Kung-Ch'in Tarqan 拱勤大官	Turkish	1	2
Total Other	.....	2	4%

transaction (T13, T30). The eastern Turkestani merchants, though far fewer in number, were more likely to have carried out multiple transactions. Pai Chia-

<sup>83</sup> For the identification of An, Ts'ao, Ho, K'ang, and Shih, see Edwin G. Pulleyblank, "A Sogdian Colony in Inner Mongolia," *TP* 41 (1952), pp. 319-23. For Pai, Chū, and Ti, see Yao Wei-yuan 姚薇元, *Pei-ch'ao hu-hsing k'ao* 北朝胡姓考 (Peking: Chung-hua, 1962), pp. 310-12, 371-76, 397-99. For Ning and Kung-ch'in Tarqan, see Chu, "Ch'ü shih Kao-ch'ang wang-kuo te 'ch'eng-chia ch'ien," p. 19.

<sup>84</sup> G. Le Strange, *The Lands of the Eastern Caliphate* (1905; rpt. London: Frank Cass, 1966), p.

men-jung 白迦門賊 from Kucha bought silk thread three times late in the fourth month and early in the fifth.<sup>85</sup> Chū Pu-lü-to 車不六多 sold silk thread on two occasions to Pai Chia-men-jung and at two other times bought turmeric root and gold (T14, T31, T32, T36). In a separate document he was the recipient of a large quantity of grain that he may have bought.<sup>86</sup> Ti T'o-t'ou 崔陶頭 sold gold and silver (T10, T19). The eastern Turkestani merchants seem to have operated locally, or moved in a definite circuit between two oases. For example, Pai Chia-men-jung most likely was buying silk thread in Turfan to carry back to Kucha for weaving, but also could have been operating locally because others with the Pai surname are known to have lived at Kao-ch'ang.<sup>87</sup> On the other hand, the Sogdian merchants, who generally only were involved in one transaction, appear more likely to have been itinerant, moving from oasis to oasis buying and selling goods in search of profit. In this case they probably did not carry goods from Iran to China, but bought and sold at different localities pursuing a marginal profit. In this way they would have operated much like the seventeenth-century caravan peddlers about whom we know more. The seventeenth-century merchants normally did not take on the risk of specializing in one good, or carry an item all the way from the producer to the consumer, but sought profit by buying and selling relatively small bulk quantities in itinerant travels from market to market.<sup>88</sup> On the medieval Silk Road it appears that goods passed between many hands as they moved between the east and west.

Still it is clear that many of these Sogdians settled down in Turfan. Sogdians appear to have resided in Kao-ch'ang by early in the seventh century, but we do not have indication that they congregated together.<sup>89</sup> There is evidence of a substantial numbers of Sogdians living in the same vicinity by the early-eighth century. A T'ang census document from Ch'ung-hua township (Ch'ung-hua *hsiang* 崇化鄉) of Kao-ch'ang county in the year 707 lists forty-eight

466. W. Barthold (C. E. Bosworth, ed.; W. Barthold and T. Minorsky, trans.), *Turkestan Down to the Mongol Invasion*, 3d edn. (London: Luzak, 1968), pp. 92-96.

<sup>85</sup> T30 (with "Pai" missing), T31, T32 (with name of item of missing, but tax rate of 1.5 coins on 10+ *chin* appears to be that of silk). The final character in the merchant's name is non-standard and I have merely deduced its pronunciation.

<sup>86</sup> See n. 71.

<sup>87</sup> A Kao-ch'ang land tax document includes a family head with the Pai surname (68TAM99:2 in *TCWS* 4, addendum, p. 50). For more information on this document, see n. 99, below.

<sup>88</sup> Niels Steensgaard, *The Asian Trade Revolution of the Seventeenth Century: The East India Companies and the Decline of the Caravan Trade* (Chicago: U. of Chicago P., 1973), pp. 22-50.

<sup>89</sup> See Sogdian surnames in the two Kao-ch'ang land tax documents cited in n. 99. Of the aggregate of 58 surnames recorded in both documents, six or a little over ten percent are recognizably Sogdian.



households with legible Chinese and Sogdian surnames.<sup>90</sup> Of these, twenty-six households (54 percent) were recognizably Sogdian. The distribution of Sogdian surnames in the document is represented in table 7.

When this table is compared with the previous one depicting the distribution of Sogdian merchant surnames from about a century earlier, we can see that in both cases the same five surnames are present and K'ang (Samarqand) is most numerous. In the census document, only half of the Sogdian households were headed by adult males, all of whom were allotted land for farming. Many of them served as part-time soldiers 衛士 in the T'ang military, and

Table 7. Sogdian Households in 707 AD Census Document

SURNAME	NUMBER	PERCENTAGE
An	7	27
Ts'ao	4	15
Ho	2	8
K'ang	11	42
Shih	2	8
Total	26	100%

must have been well integrated into Chinese society. The other half were headed by adult females, teenagers, or children, many of whom were newly entered upon land registration documents and had not been given land for farming. Could these have been families of traders who spent most of their time away from home engaged in commerce? It also is notable that a similar community of Sogdians also existed at the nearby oasis city of Tun-huang. A mid-eighth century census document from that city, which Ikeda On 池田温 has studied extensively, contains an even greater variety of Sogdian surnames.<sup>91</sup> This demonstrates that Turfan and Tun-huang were part of what Philip Curtin calls a "trade diaspora," his term for a network of alien merchant communities living in non-native towns and carrying out trade along particular routes.<sup>92</sup> In the case of Turfan and Tun-huang the alien trade community seems to have been made up mainly of Sogdians.

More information about the nature of this trade diaspora comes from some official and private documents relating to one early-eighth century Sog-

dian trader, Shih Jan-tien 石染典. A T'ang government travel permit dated 732 gives some idea about his standing in T'ang society and the circuit he traversed.<sup>93</sup> The document refers to him as a T'ang subject residing at Turfan (Hsi-chou 西州). He was entitled to use a high-ranking T'ang military prestige title, which probably indicates that he had performed meritorious military service and provides further evidence that the Turfan Sogdians were well integrated into T'ang society.<sup>94</sup> Shih Jan-tien was traveling with two Sogdian assistants, a slave, and ten donkeys. The pack animals must have carried his goods. The travel permit allowed him to journey west from Kua prefecture (Kua-chou 瓜州) in northwestern Kansu to Kucha (An-hsi 安西) in the Tarim Basin via the Iron Pass near Karashahr, a distance of more than 1,000 kilometers. We do not know whether he reached Kucha on this occasion, but official notations on the permit indicate that he traveled at least as far as Hami (I chou 伊州) and engaged in trade at Tun-huang (Sha-chou 沙州) and Hami. Another government document allowing him to travel to Hami for trade demonstrates that he planned to return to that city in the first lunar month of 733. Business must have been going well for him because he now had a horse and mule in addition to his ten donkeys.<sup>95</sup> A private contract shows that he had just purchased the horse in Turfan for eighteen rolls of silk on the fifth day of the same month.<sup>96</sup> Since the contract was drawn up in Turfan and he planned to travel to Hami, on this occasion he was heading east. His travels to the east and west demonstrate circuitous trading patterns.

<sup>90</sup> 64TAM35:47(a)-58/3(a) in *TCWS* 7, pp. 468-85.

<sup>91</sup> Ikeda On, "Hachi seiki chūyō ni okeru Tonkō no Sogudojin shūraku" 8世紀中葉における敦煌のステッド人聚落, *Yūrasia bunka kenkyū* ユーラシア文化研究 1 (1965), pp. 49-92, which is translated into Chinese in Liu Chün-wen 劉俊文, ed., *Jih-pen hsieh-che yen-chiu Chung-kuo shih lun-chu hsian i ti chiu chuan min-tsu chiao-t'ung* 日本學者研究中國史論著選譯第九卷民族交通 (Peking: Chung-hua, 1993), pp. 140-220. The original document is P 3559 (=3664v), P 2657, P 3018v in Yamamoto Tatsuro and Dohi Toshikazu, eds., *Tun-huang and Turfan Documents concerning Social and Economic History II, Census Registers (A) Introduction and Texts* (Tokyo: The Toyo Bunko, 1985), pp. 109-111, 115-29.

<sup>92</sup> Philip D. Curtin, *Cross-Cultural Trade in World History* (Cambridge: Cambridge U.P., 1984), pp. 1-3.

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Shih Jan-tien's permit to travel to Hami provides some information about the relationship between the settlers and the itinerant merchants in the Sogdian trade diaspora. To obtain the permit, Shih Jan-tien needed to have a compatriot guarantee that he had a house and family and had not gained the use of his employees, slave and pack animals under false pretenses. The guarantor also had to pledge to be responsible for Shih's taxes if he did not return.<sup>97</sup> This demonstrates that settled people in the trade diaspora assisted their mobile brethren in dealing with local authorities. We also can suppose that they pro-

<sup>93</sup> 73TAM509:8/13 in *TCWS* 9, pp. 40-43. I thank Professor Ch'en Kuo-ts'an for pointing out to me this and other documents relating to Shih Jan-tien.

<sup>94</sup> The prestige title was mobile corps commander (*yu-chi chiang-chün* 游擊將軍), which indicates a rank of 5b2. See Robert des Rotours, *Le traité des fonctionnaires et traité de l'armée. Traduit de la nouvelle histoire des Tang (Chap. XLVI-L)*, 2d edn. (San Francisco: Chinese Materials Center, 1974), p. 101.

<sup>95</sup> 73TAM509:8/9(a) in *TCWS* 9, pp. 44-47. <sup>96</sup> 73TAM509:8/10 in *TCWS* 9, pp. 48-49.

<sup>97</sup> The first part of this document has been lost, so we do not know the surname of the guarantor. However, he probably was a Sogdian because we know that his given name was Jan-wu 染勿. This name definitely is non-Chinese and its closeness to Shih Jan-tien's leads me to believe that it also is Sogdian.



vided lodging and supplies to traveling merchants. Contacts with Sogdian settlers would have been invaluable to Shih Jan-tien as he negotiated a trade circuit stretching 1,000 kilometers from Kansu in the east to Kucha in the west.

Although in Shih Jan-tien's time the silver coins no longer were current at Turfan, the earlier scale-fee document from the Kao-ch'ang kingdom period shows that a major way for the silver coins to enter the local economy was through taxes on the Sogdian merchants. The Kao-ch'ang government used the silver coins that it received to meet its expenses. This is demonstrated by documents D<sub>3</sub>, D<sub>4</sub>, and D<sub>5</sub>, which record the purchase of horses by Kao-ch'ang authorities. Fragments of an undated Kao-ch'ang record show that the government used silver coins to meet its payroll.<sup>98</sup> 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.<sup>99</sup> We can assume that governmental taxation of merchants was the most important means of bringing coins into the local economy, especially in the 620s and 630s, because of the previously mentioned efforts of the government in that period to dominate trade in cooperation with the Turks. The military might of the Turks kept commercial traffic funneled to Turfan so that the Kao-ch'ang government could tax traders for the benefit of the Turks and Kao-ch'ang's rulers.

A similar phenomenon appears to have occurred at other cities on the middle route. The Buddhist pilgrim Hsüan-tsang reported seeing coins of bronze, silver, and gold used to buy goods at Karashahr and Kucha.<sup>100</sup> As mentioned previously, a total of three Sasanian drachms have been discovered in these cities. At least at Kucha the silver coins must have been numerous because traditional Chinese histories report that Kuchans without land

<sup>98</sup> 86TAM388:22-1, 22-4, 22-3, 22-2, 21-3, 21-1. These are unpublished documents in the collection of the Turfan Museum.

<sup>99</sup> On Kao-ch'ang's land tax, see *PS* 97, pp. 3215-19; *TT* 191, p. 5204; Wei Shou 魏收, *Wei shu* 魏書 (Peking: Chung-hua, 1974) 102, p. 3266; Ling-hu Te-fen 令狐德棻, *Chou shu* 周書 (Peking: Chung-hua, 1971) 50, pp. 915-97. Two Turfan documents have been found that may be land tax records showing exactions in silver coins (67TAM78:17(a), 18(a), 19(a), 28(a) and 68TAM99:2 in *TCWS* 4, pp. 68-70, addendum, pp. 50-51). The latter is dated 631. Hsieh "Ch'ü shih Kao-ch'ang fu-i chih-tu," Cheng, "Shih-liu-kuo chih Ch'ü shih wang-ch'ao shih-ch'i Kao-ch'ang shih-yung yin-ch'ien," and Lu, "Shih-lun Ch'ü shih Kao-ch'ang shih-ch'i te fu-i" argue that these are tax documents.

<sup>100</sup> Hsüan-tsang 玄奘 (Li Hsien-lin 李羨林 et al., eds.), *Ta Tang Hsi-yü chi chiao-chu* 大唐西域記校注 (Peking: Chung-hua, 1985) 1, pp. 48, 54; Samuel Beal, *Si-yu-ki: Buddhist Records of the Western World* (1884; rpt. New York: Paragon, 1968), pp. 88-89.

had to pay taxes in silver specie.<sup>101</sup> This undoubtedly was a merchant tax. These sources do not mention the tax system at Karashahr.

## THE DECLINE OF SILVER-COIN CIRCULATION IN TURFAN

In 640 the Chinese T'ang dynasty conquered the Kao-ch'ang kingdom and ruled Turfan until late in the eighth-century. As demonstrated in table 4, the conquest initially had no effect on silver coin circulation. For forty years after the T'ang occupation silver coins remained an important part of the local economy. In table 3 the short period that coin C13 circulated before being buried in the early 650s demonstrates that silver coins were still being imported around a decade after the T'ang conquest. After the 670s the circulation of silver coins in Turfan began to drop off and from about the year 706 there is no more evidence of silver coins there.

The reason or reasons for this decline in the importation of silver coins into Turfan and their gradual disappearance from circulation are more difficult to explain than those concerning their appearance. The drying up of the silver coin supply might be related to regional political and economic factors in the short term or wholly or partly the result of long-term global factors. As mentioned in the introduction, in the long term Near Eastern coins ceased to be imported into China at some point early in the eighth century. After the Islamic Umayyad caliphate (661-750) ended the minting of Arab-Sasanian and Arab-Byzantine coins around the year 700, the caliphate began to issue purely Islamic coins.<sup>102</sup> Only three of these purely Islamic, post-700 coins have been found in China. These are all gold dinars that were found in a middle-to-late-T'ang tomb outside of the provincial capital of Hsi-an in Shensi province. The coins are dated 83 A.H. (702-703 AD), 100 A.H. (718-719), and 127 A.H. (744-745).<sup>103</sup> No coins of the 'Abbāsīd caliphate (749-1258), which was based in Baghdad, or the Sāmānid dynasty (819-1005), which controlled eastern Iran and Transoxiana, have been found in China or eastern

<sup>101</sup> *Wei shu* 102, p. 3266; *Chou shu* 50, p. 917; *PS* 97, p. 3217.

<sup>102</sup> For more information on the reform of Islamic coinage see Philip Grierson, "The Monetary Reforms of 'Abd al-Malik: Their Metrological Basis and Their Financial Repercussions," *Journal of the Economic and Social History of the Orient* 3 (1960), pp. 241-63; and Michael L. Bates, "History, Geography and Numismatics in the First Century of Islamic Coinage," *Revue Suisse de Numismatique* 65 (1986), pp. 231-63.

<sup>103</sup> A description of the find and photos of the coins are in Hsia Nai, "Hsi-an T'ang mu ch'ü-t'u A-la-po chin-pi" 西安唐墓出土阿拉伯金幣, *KK* 8 (1965), pp. 420-23. Hsia misidentifies the date of the latest coin as 129 A.H. He correctly identifies the date of the earliest coin as 83 A.H., but the caption to its photo has an erroneous date of 84 A.H.

Turkestan. This is despite the fact that the Sāmānids discovered new supplies of silver that were used to mint large quantities of coins. As mentioned previously, around 200,000 of these mostly Sāmānid silver coins have been discovered in parts of Europe. The reasons for the ending of Near Eastern silver coin importation into Eastern Turkestan and China is unclear and will have to await further research that uses a wider body of evidence than has been marshalled here. However, it is possible that the immediate cause of the end of silver circulation in Turfan was related to short-term regional factors. Accordingly, we turn to an outline of some of the possible short-term causes for the decline in Turfan's silver coinage.

Late in the seventh century the drop-off of silver coins in circulation at Turfan coincides with the T'ang's intermittent loss of the oases of the Tarim Basin to the Tibetans in the 670s and 680s. Although there is no consensus about the exact date when the Tarim was lost to the Tibetans, those who argue for the 680s agree that there was at least heavy fighting there between the T'ang and Tibetans in the 670s.<sup>104</sup> Fighting would have been an impediment to traders who traveled between its oases. We have no information about Tibet's commercial policy during the years when it definitely controlled the Tarim. As Tibet was a hostile power, it seems likely that it blockaded or heavily taxed trade to and from China. These factors may account for some of the decline in silver circulation in Turfan by the 690s.

The T'ang dynasty's fiscal policies also affected the circulation of silver coins. Taxation and spending normally were carried out with grain, silk, and to a lesser extent bronze coins. However, there is confirmation that the T'ang

<sup>104</sup> Although some T'ang sources state that the Tibetans held the Tarim Basin from 670 to 692 (*CTS* 40, p. 1647; 198, p. 5304; *HIS* 40, pp. 1047-48), scholars disagree about the extent of Tibetan control during this interregnum. Satō and Wang hold that Tibet did not gain full control of the Tarim until 686, but Beckwith remains adamantly opposed to this view. See Satō Hisashi 佐藤長, *Kodai Chibetto shi kenkyū* 古代チベット史研究 (Kyoto: Tōyō shi kenkyūkai, 1958-59) 1, pp. 324-52; 2, pp. 12-13; Wang Hsiao-fu 王小雨, *Tang Tu-po Ia-shih cheng-chih kuan-hsi shih* 唐吐蕃大食政治關係史 (Peking: Pei-ching ta-hsüeh ch'u-pan she, 1992), pp. 68-88; Christopher Beckwith, *The Tibetan Empire in Central Asia* (Princeton: Princeton U.P., 1987), pp. 197-202. However the weight of direct and indirect evidence indicates that the T'ang held the Tarim from at least 679 to 686 and possibly earlier. See Huang Hui-hsien 黃惠賢, "Ts'ung Hsi-chou Kao-ch'ang hsien cheng-chien ming-chi k'an Ch'ui-kung nien-chien Hsi-yü cheng-chü chih pien-hua" 從西州高昌縣征鎮名籍看垂拱年間西域政局之變化, in T'ang, ed., *Tun-huang Tu-lu-fan wen-shu ch'u-t'an*, pp. 396-438; Wang Hsiao-fu, *Tang Tu-po Ia-shih cheng-chih kuan-hsi*, pp. 79-81; and Wang Yung-hsing 王永興, *Tang-tai ch'ien-ch'i hsi-pei chün-shih yen-chiu* 唐代前期西北軍事研究 (Peking: Chung-kuo she-hui k'o-hsüeh ch'u-pan she, 1994), pp. 228-32. There is no debate that Tibet held the Tarim from 686 to 692 and that the T'ang reestablished administration there in 693. See *CTS* 40, p. 1647; 198, p. 5304; *HIS* 40, p. 1047; 43B, p. 1134; Ssu-ma Kuang 司馬光, *Tzu-chih t'ung-chien* 資治通鑑 (Peking: Chung-hua, 1956) 213, p. 6773. The Tarim remained under T'ang control until the Tibetan reconquest late in the eighth-century; Wang, *Tang Tu-po Ia-shih cheng-chih / Okuan-hsi*, p. 69.

accepted silver coins in some cases. A tax statute that was promulgated in 624 and again in 719 and 738 called for the taxation of "surrendered barbarians" in silver coins.<sup>105</sup> However, this was a general tax statute and we have no evidence that it was implemented in Turfan. The repromulgation of the statute early in the eighth century may indicate that silver coins still circulated in some places other than Turfan or that the law was reissued without regard to changing circumstances. We also have evidence that the T'ang government at Turfan in some instances accepted silver coins as tax payments. A fragmentary document from 645 (D25), which appears to record a levy of some sort, mentions that one person was allowed to pay "two silver coins" instead of an unknown item that the government was accepting from other people. Another document (D45) shows that the government was willing to take payments of silver coins in lieu of bronze ones in the 690s. This was done at a rate of one silver coin for every 32 bronze cash. One undated document, probably from the mid-seventh century, shows that the government sometimes used the silver coins to make purchases.<sup>106</sup>

Despite the T'ang's acceptance of silver specie at Turfan in the seventh century, the coins appear to have been a minor component of the local government's fiscal operations. Monetary silk and to a lesser extent bronze coins were the dominant "currencies" employed by the T'ang government at Turfan. The presence of monetary silk in the local economy is related to the T'ang's military occupation of Turfan and the rest of eastern Turkestan. This was a

<sup>105</sup> *CTS* 48, p. 2088; Li Lin-fu 李林甫 and Li Lung-chi 李隆基, *Ta T'ang liu tien* 大唐六典 (Sian: San-ch'in ch'u-pan she, 1991) 3, pp. 36b-37a; Wang Ch'in-jo 王欽若 et al., *Ts'e-fu yüan-kui* 冊府元龜 (1642 edn.; facs. rpt. Peking: Chung-hua, 1960) 487, p. 16b; Ma Tuan-lin 馬端臨, *Wen-hsien t'ung k'ao* 文獻通考, Shih t'ung 7 (Shanghai: Shang-wu yin-shu kuan, 1935), ch. 2, p. 41c; Niida Noboru 仁井田陞, *Tōryō shūi* 唐令拾遺 (Tokyo: Tōhō bunka gakuin Tōkyō kenkyūsho, 1933), pp. 671-72, article 6; Denis Twitchett, *Financial Administration under the T'ang Dynasty*, 2d edn. (London: Cambridge U.P., 1970), p. 142, article 6. Parallel versions of the statute in the *CTS*, *Ts'e-fu yüan-kui*, and *Wen-hsien t'ung k'ao* date it to 624. In that year the first T'ang emperor, Kao-tsu, issued a series of statutes (Niida, *Tōryō shūi*, pp. 12-13). A slightly different version of the statute also appears in *Ta T'ang liu tien*. Although this work was presented to the throne in 738, Niida dates its statutes to 719 (*Tōryō shūi*, pp. 61-65). Thus the statute appears to have been in force from the first half of the seventh through at least the first half of the eighth centuries. *CTS*, *Ts'e-fu yüan-kui*, *Wen-hsien t'ung k'ao*, and Niida, *Tōryō shūi*, all state that the tax was to be paid in bronze coins. Only *Ta T'ang liu tien* specifies that the coins were to be silver. Twitchett correctly points out that a tax in bronze coins would be an impossibly small amount. He also notes correctly that silver coins circulated on the T'ang's northern frontiers and in Inner Asia.

<sup>106</sup> 73TAM214:148(a), 149(a), 147(a) in *TCWS6*, pp. 310-11. This document was from a tomb with three occupants and an epitaph dated 665 (*TCWS6*, p. 302). The document appears to describe an "equitable purchase" (*ho-ti* 和羅), which is one means that the T'ang used to supply its army; *HIS* 53, p. 1373; *Tzu-chih t'ung-chien* 214, p. 6830; Ch'en Yin-k'o 陳寅恪, *Sui Tang chih-tu yüan-yüan lüeh-lun kao* 隋唐制度淵源略論稿 (Peking: Chung-hua, [1944] 1963), pp. 148-49; Skaff, "Straddling Steppe and Sown," pp. 246-50.

strategically important region for the dynasty because it provided a buffer between the Tibetans, Western Turks, and Eastern Turks.<sup>107</sup> As I have shown elsewhere, local taxation could only meet a fraction of the fiscal requirements of the T'ang's relatively large military administration at Turfan and other parts of eastern Turkestan.<sup>108</sup> To make up part of the difference, the government sent large quantities of monetary silk to border regions. For example, in 742 the central government spent a total of 1.1 million bolts of silk in eastern Turkestan.<sup>109</sup> Documents reflect the fact that monetary silk began to circulate along with silver coins in Turfan immediately after the T'ang conquest. Monetary silk continues to appear in documents from Turfan until they die out in the mid-eighth century when eastern Turkestan was cut off from the rest of the T'ang empire due to civil war in the interior and a Tibetan invasion of Kansu after 760.<sup>110</sup> The silks that were used in monetary transactions were simple undyed weaves, but they could have been exchanged for the finer grades of silk that would have been in demand to trade to the west.<sup>111</sup> Not only monetary silk, but Chinese bronze coins begin to appear in Turfan documents after the T'ang conquest. The bronze coins emerged in the 680s and continued to circulate alongside silk until the Turfan documents end in the middle of the eighth century.<sup>112</sup> Although T'ang coins do not have mints or dates, the majority of them in Turfan probably were minted in the Tarim Basin.<sup>113</sup>

<sup>107</sup> See *ibid.*, chap. 2.

<sup>108</sup> *Ibid.*, pp. 242-46.

<sup>109</sup> *Tzu-chih t'ung-chien* 215, pp. 6847-48; *CTS* 38, pp. 1385-86; 40, pp. 1645-46; *TT* 172, p. 4479. The dating is according to the first of these three sources. The troop and silk totals represent the aggregates of the separate figures given in the sources for the An-hsi and Pei-ting military commissions that controlled the Turfan and Tarim Basins and their environs. Silk was measured in bolts ( $p' \text{匹}$  or  $\text{匹}$ ) that officially were supposed to be 4 *chang* (12 meters) long by 1 *ch'ih* 8 *ts'un* (54 cm) wide. For the T'ang statutes governing cloth taxation and standard sizes see Niida, *Tōryō shūi*, p. 659; Twitchett, *Financial Administration*, p. 140.

<sup>110</sup> Lu, "Kao-ch'ang Hsi-chou ssu-pai nien huo-pi kuan-hsi," pp. 239-46, describes 7th-c. documents that mention silk. Although nobody has systematically collated 8th-c. documents referring to monetary silk, it is my impression that the T'ang government used silk most frequently as the medium for making payments in this period. On the Tibetan invasion of Kan-su after 760, see Michael T. Dalby, "Court Politics in Late T'ang Times," in Denis Twitchett, ed., *The Cambridge History of China, Vol. 3: Sui and Tang China, 589-906, Part 1* (Cambridge: Cambridge U.P., 1979), pp. 568-69; and C. A. Peterson, "Court and Province in Mid- and Late T'ang," in *ibid.*, pp. 479, 486.

<sup>111</sup> See Angela Sheng's article in this volume of *Asia Major*.

<sup>112</sup> Lu, "Kao-ch'ang Hsi-chou ssu-pai nien huo-pi kuan-hsi," pp. 246-58.

<sup>113</sup> Minting bronze coins was not profitable for the T'ang government. Transporting large quantities of the heavy coins to the northwest would have cost far more than their value, because the bronze used to mint them alone cost the government 750 coins to mint 1,000; Twitchett, *Financial Administration*, pp. 69-70. That is why the government transported the lighter silk, instead of bronze coins, to the northwest to support its border troops. Although the lack of mint names on T'ang coins makes it difficult to prove that the T'ang government issued coins in the

The T'ang government's injection of bronze coins and monetary silk into Turfan probably decreased the economy's need for silver coins. Other aspects of fiscal policy discouraged the continued circulation of silver specie. Unlike the Kao-ch'ang government, the T'ang did not tax merchants who came to Turfan. In the eighth century the T'ang began to defray part of its military expenses in eastern Turkestan by exacting levies on merchants, but taxation took place on the middle route at Karashahr, Kucha, and Kashgar instead of Turfan.<sup>114</sup> Without a tax policy in place that replenished the supply of silver coins at Turfan, their circulation became totally dependent on the market, which apparently was not enough to sustain their dominance as a currency.

From the above discussion we can see that short-term trends in warfare and T'ang fiscal policy in the period from about 640 to 760 may possibly account for the local disappearance of silver coins from Turfan. However, these factors cannot explain the long-term retreat of Near Eastern coins from eastern Turkestan and East Asia. Although a definitive answer to this problem will require further research, I will advance one hypothesis to explain this phenomenon. Evidence suggests that from the eighth century onward merchants may have begun to carry silver bullion in place of coins along the Silk Road to China. For most of Chinese history bullion was conveyed in the form of ingots.<sup>115</sup> However, there have not been any archaeological finds in China of silver or gold ingots datable to the fourth through seventh centuries when Sasanian drachms were being carried to the east.<sup>116</sup> Ingots reappeared in Chi-

northwest in this time, there is solid evidence that bronze coins were minted there in the late-8th c. After communications permanently were cut between Turkestan and the Chinese heartland around 760, the isolated provincial government began to administer itself without direction from the court. Lacking knowledge of contemporary coinage standards, the T'ang officials who had been stranded in the northwest started to mint their own bronze coins. Three types unique to Turkestan have been found: the Ta-li Yuan-pao 大曆元寶, the Chien-chung T'ung-pao 建中通寶, and coins with a single *yuan* 元 character. These coins appear to have been minted mostly at Kucha and Khotan. Chemical analysis demonstrates that they have an unusually high lead content. In the future if the common Kai-yüan cash that have been found in modern Sinkiang are subject to metal analysis, it will be possible to determine whether they also have a high lead content that indicates minting in Turkestan. See François Thierry, "On the Tang Coins Collected by Pelliot in Chinese Turkestan (1906-1909)," *Silk Road Art and Archaeology* Special Issue (1997), pp. 149-79, and Nicholas Rhodes, "Tang Dynasty Coins Made in Xinjiang," in *ibid.*, pp. 181-86. Although there is no direct evidence, it appears that they must have used existing mines and mints to produce these new types of specie, thus suggesting T'ang minting operations in the northwest prior to 760.

<sup>114</sup> *HIS* 221A, p. 6230. Taxation of merchants also took place on the northern route at Lun-t'ai 輪臺 in the vicinity of modern Urumchi.

<sup>115</sup> Cribb, "Precious Metal Currencies of China," p. 185.

<sup>116</sup> See Cribb's summation of ingots finds, which is current through the 1970s, "Precious Metal Currencies of China," pp. 198-209. To gain a more updated view of archaeological dis-

na during the eighth century and gradually replaced silk as the usual medium for payment of large sums, especially after the middle of the century. Since the purity of ingots was variable, guilds arose to appraise their quality.<sup>117</sup> This may have helped to facilitate their acceptance as a medium of exchange. In the period before the emergence of these guilds, Sasanian drachms and Arab-Sasanian dirhams would have been an excellent means of transporting silver bullion because of their widely recognized purity (as discussed in the introduction, above). However, after the development of an ingot standard and assaying guilds in the eighth century, merchants coming from the Near East may have had to adapt to the new mercantile norms in China by carrying bullion instead of coins. That ingots remained the standard for the rest of Chinese history would explain why Near Eastern coins never reappeared in China. According to this line of argument, the acceptance of silver coins from the fourth through seventh centuries is an anomaly in Chinese history.

#### SILVER COINS: COMMODITY AND CURRENCY

There is some controversy over whether the silver coins in eastern Turkestan served as a commodity, valued by weight and purity, or money with an accepted value not necessarily corresponding to its intrinsic metallic worth. Zeimal<sup>118</sup> believes that the silver coins were a commodity, but Thierry feels that they served as money.<sup>119</sup> In fact they served as both at the same time. In the late-fourth century coins did not play as important a role in the economy as they would later in the seventh. Fourth-century documents only mention purchases transacted with cloth as the medium of exchange.<sup>119</sup> The two hoards from this period that I examined were composed of coins with relatively little wear. One gains the impression that they did not frequently change hands as individual coins, but rather were exchanged in bulk for large transactions among the rich. In this way they were more akin to a commodity. However, the random finds of two coins of Ardashir II, probably deposited late in the fourth century, show that the coins could be used individually and may have had an accepted value as money. More convincing evidence that silver coins functioned as money at Turfan, Karashahr, and Kucha in the late-sixth and sev-

coveries a search through Albert Dien's in-progress computer database of Northern and Southern dynasty archaeological finds yielded nothing pointing to any new discoveries of ingots in the period under question.

<sup>117</sup> Twitchett, *Financial Administration*, pp. 70-71.

<sup>118</sup> Zeimal, "Eastern (Chinese) Turkestan on the Silk Road," p. 171; Thierry, "Sur les monnaies sassanides," pp. 132-35, who believes the coins were considered a commodity in China proper.

<sup>119</sup> Lu, "Kao-ch'ang Hsi-chou ssu-pai nien huo-pi kuan-hsi," pp. 218-26.

enth centuries comes from the testimony of the Turfan documents, the pilgrim Hsüan-tsang, and traditional Chinese histories. My examination of the coins from tombs supports this claim. Unlike the earlier hoards, the tomb coins show a great deal of wear that must have come from repeated handling while being used to transact business. In a few cases the coins from the later period are pierced or gilded (C1, C9, C22, C31), apparently to serve as jewelry (and perhaps also a source of savings), but this must have been a secondary function. We also cannot be sure that Turfan residents were responsible for these modifications to the coins.

Another controversial point is Thierry's belief that the use of the coins was culturally determined. He states that the coins were used as money in eastern Turkestan mainly because Sogdians and Persians carried this practice from the west.<sup>120</sup> Although it is possible that Sogdians brought the idea of using silver coins, cultural influence was not as decisive as other factors. First, global, regional, and local events determined the availability of the coins. In the fifth and early-sixth centuries, the decline of middle route trade made the circulation of silver coins impossible. When specie returned to Turfan in large quantities in the late-sixth century, it began to be used as money. Although Sogdian cultural influence and market forces may have played a part in the acceptance of silver coins as a medium of exchange, their extensive monetary use probably was primarily the result of the Kao-ch'ang government's fiscal policies that replenished coin supply by taxing merchants. After the T'ang conquest of Kao-ch'ang in 640, Turfan became part of the Chinese empire and subject to the influence of its fiscal policies. Although silver coins were still being brought from the Near East in the seventh century, the T'ang's taxing and spending policies that favored silk and bronze coins led to their growing use as exchange media at Turfan. Without fiscal policies taxing merchants to inject new silver coins into Turfan's economy, apparently private commerce alone could not replenish the supply of silver coins adequately and their use began to wane. Culture cannot explain this trend because the continued presence of Sogdian settlements in Turfan at this time did nothing to reverse the decline. In the eighth century silver coins no longer circulated because they were unavailable. This may be connected to movement toward an ingot standard in China.

The experience of Turfan supports Richard von Glahn's argument that the monetization of an economy is not a product of unilinear economic development driven by private commerce. His research on late-imperial China shows

<sup>120</sup> Thierry, "Sur les monnaies sassanides," pp. 132-33.

that the prevailing medium of exchange can shift depending on state policy and a market's particular needs, resources, and patterns of trade.<sup>121</sup> These factors all seem to have played a role at Turfan. Lack of indigenous silver resources made the city entirely dependent on international trade to supply silver coins. When patterns of trade made silver coins available, market forces and fiscal policy led to their rise and decline as a medium of exchange.

Ultimately, Turfan and the other trading cities on the Silk Road had little control over the larger patterns of international trade. They could only siphon off some of the wealth passing through their cities. The case of silver coins at Turfan demonstrates that their availability ultimately was determined by political and economic events in China, the Near East, and Inner Asia. The fifth-century dearth of silver coins at Turfan is attributable to political instability in China and Inner Asia. Late in the sixth century great wealth came to the city when favorable circumstances throughout Asia intensified trade on the middle silk route. The disappearance of silver coins in Turfan also may be attributable to events in China. Turfan, as a small oasis city caught between greater economic and political powers, ultimately had little control over its economic destiny.

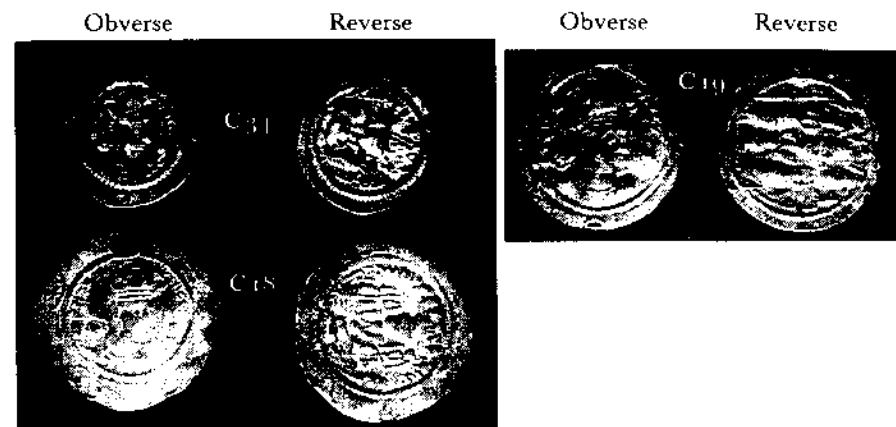
#### LIST OF ABBREVIATIONS

CS	<i>Chin shu</i> 晉書
CTS	<i>Chiu Tang shu</i> 舊唐書
HTS	<i>Hsin Tang shu</i> 新唐書
P	Pelliot mss.; followed by catalog no. Bibliothèque Nationale, Paris
PS	<i>Pei shih</i> 北史
SS	<i>Sui shu</i> 隋書
TAM	T'u-lu-fan A-ssu-t'a-na mu-tsang; prefix no. is yr. of excavation; suffix no. is tomb no.; after colon are item no., slash, and then fragment no.
TT	<i>T'ung tien</i> 通典
TCWS	<i>T'u-lu-fan ch'u-t'u wen-shu</i> 吐魯番出土文書

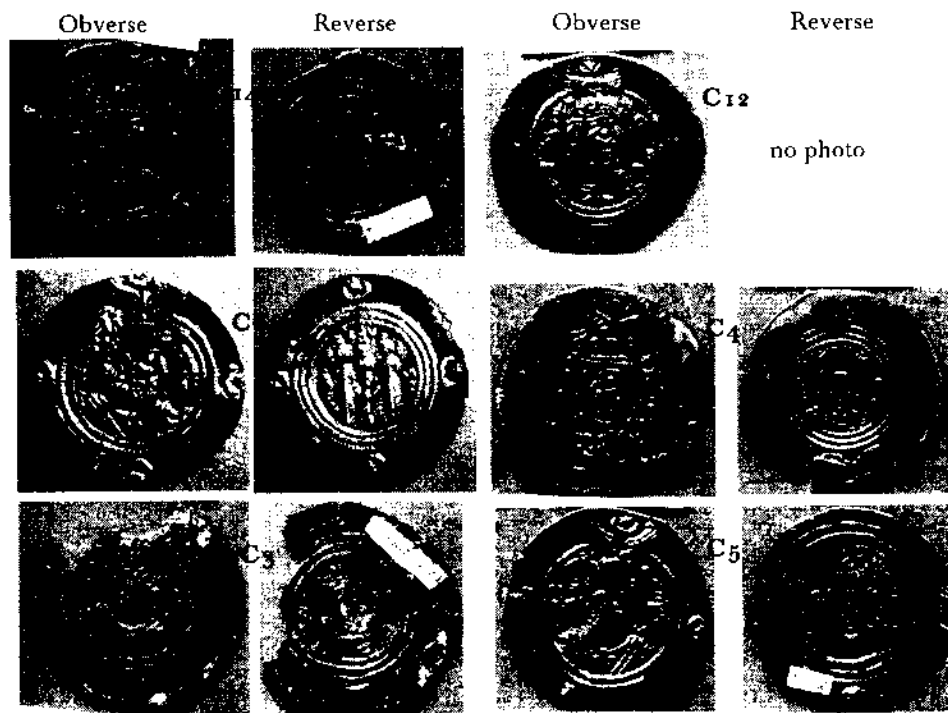
<sup>121</sup> Richard von Glahn, *Fountain of Fortune: Money and Monetary Policy in China, 1000-1700* (Berkeley: U. of California P., 1996), pp. 9-11.

#### Illustrations of Selected Coins Discussed in Article

Complete descriptions of coins are found in the two appended tables, listed by author's reference numbers.



The above three silver coins from Turfan are in the collection of the British Museum; by permission. (© The British Museum)



The above six silver coins from Turfan are in the collections of the Turfan and Sinkiang Museums; by permission (author's photographs).

*Table of Dated Turfan Documents That Mention Silver Coins*

Two important sources for this table are Lu, "Kao-ch'ang Hsi-chou ssu-pai nien huo-pi kuan-hsi," and Kuo Yüan 郭媛, "Shih-lun Sui T'ang chih chi T'u-lu-fan ti-ch'ü te yin-ch'ien" 試論隋唐之際吐魯番地區的銀錢, *Chung-kuo shih yen-chiu* 中國史研究 4 (1990), pp. 19-33.

Items with asterisk are those intentionally placed in tomb of moneylender; they thus skew the data in favor of the 660s and 670s; see discussion, above.

REF. NO.	DATE	CONTENTS	REFERENCES
D1	584	Land-rent contract: " 5 silver coins" for 1 <i>mu</i>	60TAM326:01/6 in TCWS 5:154
D2	586	Land-rent contract: " 5 silver coins," " 3 coins"	67TAM364:10/2 in TCWS 3:187
D3	587	Gov. doc.: " 45 silver coins" to buy horse	66TAM48:28, 32 in TCWS 3:75
D4	587	Gov. doc.: " 67 silver coins" to buy 2 horses	66TAM48:35, 40 in TCWS 3:86
D5	587	Gov. doc.: " 1+ <...> silver coins" to buy 48 horses	66TAM48:27 in TCWS 3:77
D6	588	Date-tree rent contr.: " Penalty of 2 silver coins"	67TAM364:11 in TCWS 3:189
D7	588	Land-rent contr.: " 9 silver coins"	60TAM308:8/1 in TCWS 2:302
D8	602	Loan contr.: " silver coins"	64TAM34:12, 14 in TCWS 3:2
D9	606	Loan contr.: " 20 silver coins"	60TAM321:01/4 in TCWS 3:18
D10	609?	Contr.: " 9 silver coins"	64TAM320:01/6, 01/7 in TCWS 3:40
D11	613	Contr. for hiring laborers: " 20+ <...> silver coins"	72TAM151:04 in TCWS 4:156
D12	623	Land-rent contr.: " 2 silver coins"	no doc. number in TCWS 3:310
D13	625	Tree-rent contr.: " 8 silver coins"	60TAM338:14/4 in TCWS 5:132
D14	627	Contr. for purchasing servant: " 380 silver coins"	60TAM338:14/2a in TCWS 5:134
D15	628	Land-purchase contract: " 4 silver coins"	69TAM135:2 in TCWS 3:243
D16	629	Land-rent contract: " 20 silver coins"	69TAM338:14/1 in TCWS 5:136
D17	631	House-purchase contr.: " 300 silver coins"	64TAM10:37 in TCWS 5:74
D18	631	Tax (?) ledger: " ...paid 2 silver coins [each]"	68TAM99:2 in TCWS 4 [appendix]:50 ]
D19	632	Loan contr.: " 20 silver coins"	69TAM140:18/2 in TCWS 5:56
D20	635-8	Ledger: " ... 2 silver coins"	64TAM15:31, 32/4, 30, 32/1, 28/1, 28/2 in TCWS 4:36
D21	637	Receipt: " 1 [silver] coin and 14 bronze coins"	59TAM302:35/3 in TCWS 5:24

*Continued:*

REF. NO.	DATE	CONTENTS	REFERENCES
D22	637	Land-purchase contract: " 20+ <...> silver coins"	64TAM15:29/2 in TCWS 4:37
D23	640	House-rent contr.: " 15 silver coins"	64TKM1:33a-2 in TCWS 4:4
D24	644	House-purchase contract: " 5 silver coins"	60TAM338:14/5 in TCWS 5:138
D25	645	Tax (?) record: " 2 silver coins"	72TAM150:41a in TCWS 6:40
D26	649	Land-rent contract: " 16 silver coins" for 2 <i>mu</i>	64TAM10:34 in TCWS 5:76
D27	651	Govt. doc.: " at a rate equal to 2 silver coins"	64TAM19:39a, 42a, 43a in TCWS 6:513
D28	653	Land-rent contract: " 6 silver coins" for 2 <i>mu</i>	64TAM10:36 in TCWS 5:80
D29	653	Land-rent contract: " 24 silver coins"	64TAM10:33 in TCWS 5:81
D30	655	Contr. hiring beacon-tower operators: " 4 silver coins"	64TAM10:43, 50 in TCWS 5:84
D31	656	Contr. hiring beacon-tower operator: " 4 silver coins"	60TAM337:11/a in TCWS 5:111
D32	658	Contr. hiring beacon-tower operators: " 4 silver coins"	60TAM338:32/4-1, 32/4-a in TCWS 5:142
D33	658	Ox-cart rental rec't.: " 3+ <...> silver coins"	64TAM74:1/3 in TCWS 6:156
D34*	660	Loan contr.: " 10 silver coins... mo. interest of 1 coin"	64TAM4:38 in TCWS 6:404
D35*	665	Loan contr.: " 48 silver coins"	64TAM4:53 in TCWS 6:414
D36*	666	Loan contr.: " 10 silver coins... mo. interest of 1 coin"	64TAM4:39 in TCWS 6:417
D37*	668	Loan contr.: " 20 silver coins... mo. interest of 2 silver coins"	64TAM4:39 in TCWS 6:422
D38*	668	Hay-purchase contr.: " 40 silver coins" penalty of " 60 silver coins" for non delivery	64TAM4:32 in TCWS 6:424
D39*	670	Land-rent contract: " For first 3 yrs. rent will be (6 <i>hu</i> of wheat every autumn. In 4th yr. [rent] will be 30 silver coins."	64TAM4:33 in TCWS 6:428
D40*	670	Loan contr.: " 40 silver coins... mo. interest of 4 coins"	64TAM4:41 in TCWS 6:430
D41*	670	Loan contr.: " 10 silver coins... mo. interest of 1 coin"	64TAM4:37 in TCWS 6:432
D42	673	Loan contr.: " 2+ <...> silver coins"	64TAM19:45, 46 in TCWS 6:525
D43	674	Funerary doc.: " On the day of the funeral [deceased] bequeaths 300 silver coins to the monks."	72TAM201:33 in TCWS 6:501
D44	677	Loan contr.: " 8+ <...> silver coins"	67TAM363:7/2 in TCWS 7:529
D45	692	Tax receipt: " 2 silver coins equal to 64 bronze coins"	64TAM35:28 in TCWS 7:441

Table of Twenty Turfan-Tomb Silver-Coins Known to Be Held in Museums

\* Nos. in parens. under "Description" follow Göbl, ibls. I-XIII.

• Weights per Sinkiang Museum, taken at different times.

REF. NO.	DESCRIPTION (TYPE NO.)	EXCAV. PLACE	MINI. MARK	MINI. DATE	BURIAL DATE	WT. GRL.	DIAM. DIM.	AXS.	CONDITION	HSLA ID NO.	CURR. ID NO.	MUS.	PHOTOS	COMMENTS
C1	Sasanian Zamāsp (I-1)	Astana, T48	NY <sup>2</sup> = Nihavand	VR 3 = 499	604	4.0	27	→	worn	667AM 4815	same	Sink	Hsia I, pl. 2, # 4	Göbl: Hsia wt. = 4.07; found in mouth of female; with finer dec. dated 694. Hsia I:110; TCWS 336.
C2	Sasanian Khusrāu I (II-2)	Astana, T225 or 337	corroded	VR 41 (48) = 571 (673)	mid 7 <sup>th</sup> c. or 571-663	2.5	26	?	heavy corrosion; clipped edge.	607AM 325027/1124 (607AM)3346	607AM 325:273	Sink	rv. in HCCT: 133, pl. 193	Mint name corroded. If tomb 325: found in mouth; if 337 then found in tomb soil.
C3	Sasanian Khusrāu II (II-2)	Astana	worn	VR 5 = 594	?	1.8	34	→	worn; corroded; large chip; missing from edge (pl. 3: 12 o'clock)	607AM 219:14	607AM 219:14	Sink	See illust. p. (above)	Found in mouth. Mint date shows only the Pahlavī letters HWM, the rest worn; HWMAS would be "five".
C4	Sasanian Khusrāu II (II-3)	Astana, T92	BN <sup>7</sup>	VR 20 = 609	639	3.1	30	→	3 pcs. broken from margin; 3-4 o'clock; 1 lost, 2 gashed on by Sink. staff.	677AM 92:32	same	Sink	See illust. p. (above)	Rings on rv. (8:12 o'clock); dbl. struck, partly obscuring face. Found in mouth. Hsia date = yr. 30/ wt. = 3.0 (Hsia I:110).
C5	Sasanian Khusrāu II (II-3)	Turfan area	WYHC <sup>6</sup> = Veh-az. Amid-Kavad	VR 21 (23) = 610 (612)	?	2.8	28	→	clipped; frag.; missing	?	TK8 <sup>11</sup>	Sink	Illust. above; obv. in HCCT: 133; HCWWE, pl. 172.	Hole drilled on shoulder near 4 o'clock.
C6	Sasanian Khusrāu II (II-3)	Turfan area?	LYW (RYW) = Rev Ardāshir	VR 28 = 618	?	?	28	→	corroded	?	none	Turf.	See illust. p. (above)	Only front letter of mint mark is visible (L or R); Hsia gives wt. = 1.8; mint = NHR.
C7	Sasanian Khusrāu II (II-3)	Astana? T339	?	VR 30-30 = 619-28	?	2.8	31	↑	corroded; fragmtd.; obv. rt. scratched w/ sharp instrmt.	607AM 339:043	607AM 339:043	Sink	none	Found in tomb soil, obv. margin has APD 3-6 o'clock; Hsia gives wt. = 3.45.
C8	Sasanian Khusrāu II (II-3)	Astana T338	AHM <sup>8</sup> = Hamēdan	VR 37 = 626	627-67	4.0	30	→	good	607AM 338:011	597AM 302:27	Sink	obv. in HCWWE # 172; HCCT: 133, pl. 193; Kuw: 171, #70	Found in mouth of fem. corpse; orig. gilded; holes drilled 6 and 12 o'clock.
C9	Sasanian Khusrāu II (II-3)	Astana T 149	LD <sup>9</sup> (RD) = Ray	VR 37 = 626	631-76	4.0	31	→	good	727AM 149:6	same	Sink	Hsia I:104; Kuw: 171, #77; obv. in HCCT: 133, pl. 193	Tomb had 1 ml. and 1 fem. coin found in mouth of male; when fun. dec. dated 672; TCWS 746; Hsia 84-3:1
C10	Sasanian empress Borān (I-1)	Astana T29	SK <sup>22</sup> = Sakostan	VR 3 = 632	672	3.8	31	→	good	647AM 29:68	same	Sink	note	

NOTES

1 Zamāsp's name not clear, but a figure faces a king and presents a diadem; Zamāsp was only ruler to mint this type of coin; see Paruck: 375; Göbl: 51, table X.

2 According to Gyselen: 153, no. 36; Göbl: 82-83, table XVI, no. 59, reads mint abbreviation as NB and does not deem mint as safely identified.

3 Emperor's name unclear, but obv. and av. both have single rings, and obv. has a crescent without star; Khusrāu I was only emperor with such design elements on coins; *ibid.*, table XI.

4 Mid-7th c. if tomb 325 (see TCWS 6: 191); ca. 571-663 if tomb 337 (TCWS 5: 101).

5 This ident. no. is incorrect. The original excavation report for this tomb in Sink.A1 only mentions coins numbered as 325:27/1 and 325:27/2. Coin C2 may be either 325:27/1 or 2, which Hsia notes as both corroded and unrecognizable coins; Hsia I: 110.

6 Probably not the "607AM 319:013" described by Hsia. Lacks hole through emperor's mouth (per Hsia), and present wt. of 1.8 g. is well under Hsia's 3.45 g. See Hsia I: 110.

7 "BN" probably indicates mint in Iran (Hsia incorrectly identifies as "BH," perhaps Baghdadour); Gyselen: 147, no. 13. The Sasanian capital was in modern Iraq, so Gyselen is identifying this mint with the eastern part of their empire. Göbl: 82-83, table XVI, no. 25, also reads as BN, judging it as unidentified.

8 Per inscription in female's tomb; TCWS 5: 166.

9 Identification is according to Gyselen: 149-51, no. 22; Göbl: 82-83, table XVI, no. 54, reads as "NYHC" and deems as not safely identified.

10 Missing frag. at about 5-6 o'clock. Coin was totally intact in published photo of 1975 in HCCT. A fragment smaller than current one is pictured as missing in 1991 photo in HCWWE.

11 Present id. number duplicates one for a Sasanian coin from a hoard found at Kao-ch'ang city, but does not match the published picture of the hoard's TK8; see photo in Hsia 2: 212, no. 8. "TK8" also cannot be a mistake for "TKM 8," which would indicate a find from tomb 8 at Karakhoja, because the original excavation report at the Sink.A1 for this tomb only mentions one coin, TKM8:1 (my C14).

12 Gyselen: 152, no. 31, reads as "LYW"; Göbl: 82-83, table XVI, no. 61, reads as "RYW"; both agree that it is Rev Ardāshir.

13 A Turfan Museum staff member went through records to find the catalog no. for the coin, yielding a record of a "667AM 303:13" (diameter = 30 mm). While looking through the excavation reports at the Sink.A1, I found that tomb TKM303 does not exist. There is a tomb TAM303, but according to the report, it did not contain coins.

14 Ruler's name indecipherable from poor condition, but two rings on obv. and three on rv., and a mint date of 30+ are readable. These are evidence of Khusrāu II, the only to reign over 30 years with this ring pattern; Göbl, table XII.

15 ID no. possibly is correct because my description of coin is close to Hsia's, with exception of weight; see Hsia I: 110. The Sink's weights at times vary from Hsia's to over 5 g. However, several other coins of Khusrāu II have been found at Turfan that date to the year 30 or later.

16 Gyselen: 144, no. 3; Göbl: 82-83, table XVI, no. 7.

17 Tomb 338 had three corpses that were buried at different times. The tomb had been heavily looted and the coin was found in the floor, so it is not possible to associate it with a particular corpse. The tomb has an inscription indicating one burial in 667, but document dates in the tomb range from 625 to 661; see TCWS 5: 131.

18 This no. is incorrect, since it does not match publ. photo of 597AM 302:27. The Hsia no. is correct. Hsia 2: 215; Hsia I: 110.

19 "APD" occurs on between 10% and 25% of all coins of Khusrāu II from year 12 to reign end. See Paruck p. 207, and S. Album, "An Arab-Sasanian Dirhem Hoard from the Year 72 Hijri," *Studia Iranica* 21 (1992), p. 163, n. 10. Coins with the APD mark almost always have a higher silver fineness than other coins of the same mint and date, and usually the combined gold-silver content is over 99 percent. See Gordus, "Neutron Activation Analysis of Coins and Coin Straks," p. 146. There seems to be no evidence to confirm Walker's speculation that specimens with APD may be Arab-Sasanian [John Walker, *A Catalogue of the Muhammadan Coins in the British Museum: A Catalogue of the Arab-Sasanian Coins* (London: The British Museum, 1941), p. xx].

20 Gyselen: 152, no. 29, reads as "LD," and Göbl: 82-83, table XVI, no. 59, as "RD," but both attribute it to Ray.

21 Hsia I: 110 has yr. 15; Kuw: 185 has yr. 37.

22 Gyselen: 154, no. 37; Göbl: 82-83, table XVI, no. 68.

23 Hsia I: 110 has yr. 2. Borān only ruled for a little more than one year, but this was a period of a rapid succession of rulers and political instability. Other coins of Borān dating to year 3 are known to have been produced at the Sasanian mint. See David Sellwood, Philip Whitting, and Richard Williams, *An Introduction to Sasanian Coins* (London: Spink & Son, 1985), p. 168.

REF NO.	DESCRIPTION (TYPE NO.)	EXCAV. N. PLACE	MINT MARK	MINT DATE	BURIAL DATE	WT. g/m.	DIAM. mm.	AXIS	CONDITION	HSLA ID NO.	CURR. ID NO.	MCS.	PHOTOS	COMMENTS
C11	Sasanian Yazdgerd III (1.1)	Astana T302	12 <sup>25</sup> =unknown	YR 1 -032	632-40 <sup>26</sup>	4.0	32	→	good	59TAM 302.27	59TAM 302.25	Sink.	Obv. in HCWWE # 172, bottom r.; obv. in HCCT: 133, pl. 193, top r.	Hsia=31. Found in mouth of fem. corpse # 1; hole pierced in outer edge of obv. ring, 5 o'clock.
C12	Sasanian Yazdgerd III (1.2)	Astana T77	SK <sup>25</sup> =Sakastān	YR 0 (18) -427 (18) (Hsia 2)	Tang 640-760	3.6	30x32	↑	worn	67TAM 77.8	same	Sink.	See illust. p. (above)	Found in mouth of female corpse.
C13	Arab-Sasanian Yazdgerd III type	Astana T302	BN <sup>25</sup> =Kirmān	YR 20 -651	651-53 <sup>26</sup>	2.9	26-28	→	clipped edges	60TAM 302.25	60TAM 332.14	Sink.	Hsia 2: 214, # 1; Kuw: 141, # 85; obv. in HCCT: 133, pl. 193, bottom left.	Wt. per Hsia=2.9, JYD=1.55yd in margin (2.6 o'clock) <sup>27</sup>
C14	Arab-Sasanian Khusrav II type	Karakhoja TR	(L.N. R. or W.) +M+(D. G. R. or Y) <sup>25</sup> =unknown	YR 4 (18) -501 (18) (Hsia 3)	Tang 640-760	3.1	27-29	→	corroded; worn; appears clipped	64TKM 81	same	Sink.	See illust. p. (above).	"Bism Allah" in margin, found in mouth of corpse.
C15	Sasanian	Astana T325 possibly T225	27 unable to determine	24-030	308463 <sup>26</sup>	2.2	29	?	contuded; scratched by sharp instrument <sup>28</sup>	60TAM 325.0271 or 2 337.08	60TAM 337.08	Sink.	none	Only single rings visible on both faces, all rings set of mint date range. If #327, then found in tomb soil; if #125 then in corpse mouth.
C16	Sasanian or Arab-Sasanian	Astana T325 or T337 (see n. 37, below)	unable to determine	500-700	mid 7 <sup>th</sup> c. or 39-683 <sup>26</sup>	3.7	?	?	corroded, then scratched by sharp instrument.	760TAM 325.0271 or 2 or 337.08	60TAM 338.011	Sink.	none	See n. 37 on coin conditions. Face and crown barely visible, w/o excavators' damage, coin probably would be readable.
C17	Sasanian or Arab-Sasanian	Karakhoja T39	unable to determine	unable to determine	65/6	unable to determine	?	?	corroded; broken into small fragment	69TKM 357.08	same	Sink.	none	For ID #, see Hsia 1:110.
C18	Imitation Sasanian, Hormizd IV (1.1)	Astana T.13	unknown	?	?	2.95	30	?		69TKM 357.08	BM Seen [A.XII 8.3]	BM	See illust. p. (above); Stein, <i>Innermost Asia</i> 2: pl. CXX, # 15.	Stein, <i>Innermost Asia</i> 2: 647, 903.
C19	Sasanian, Hormizd IV (1.1)	Astana T.13	unable to determine	YR 10 -588	?	1.85	29	?		69TKM 357.08	BM Seen [A.XII a.2]	BM	See illust. p. (above); Stein, <i>Innermost Asia</i> 3: pl. CXX, # 18.	See Stein, <i>Innermost Asia</i> 2: 647, 649, 903. Coin found in eye socket of female corpse.
C24	Sasanian, Khusrav I (1.2)	Astana?	MY <sup>25</sup> =Maysān	YR 30 -586	?	2.95	?	?		69TKM 357.08	HM Seen [A.XI.C.1]	HM	See illust. p. (above)	

<sup>24</sup> Mint abbrev. clearly visible, but neither Gyselen nor Göbl mentions it. According to Paruck, only the mint at RIU=Rev Ardashir was active in year 1 of Yazdgerd III, but this mint attribution is not possible for the coin (Paruck: 259).

<sup>25</sup> Tomb inscription dated 653, but the one male and two female bodies not buried at same time. Three documents in the tomb have dates from 637 to 650. Each female had one coin in mouth, but published reports do not specify which had which coin. The one whose body was placed farthest toward interior appears to have been buried earliest; on her was funerary doc. made from a type of paper dating to Kao-ch'ang period, dating her burial to before Tang conquest in 640 (TCWS 3: 21). This female must have had C11 in her mouth because it is dated 632 and the other coin from the tomb, C13, was minted in 651. Thus burial of C11 occurred between minting in 632 and Tang conquest in 640.

<sup>26</sup> This no. is incorrect. Published photo in Hsia 2: 214-16 definitively identifies coin as 302.27.

<sup>27</sup> Ruler name difficult to read, but similar to that seen in Paruck, pl. XXIII, no. 163 (Hsia: Khusrav II?).

<sup>28</sup> Hsia 1: 110 gives SU (?)=Susa (?); see coin C10 re. Sakastān mint.

<sup>29</sup> "T'u-lu-fan hsien A-szu-t'a-na Hsia-ho-cho," p. 10.

<sup>30</sup> Hsia 2: 214-16 and Hsia 1:110 indicate Sasanian; Kuw: 134-35 indicates Arab-Sas., Yazd. III type.

<sup>31</sup> Heinz Gaube, *Arabosassanidische Numismatik*, Handbücher der mittelasiatischen Numismatik 2 (Braunschweig: Klinkhardt & Biermann, 1973), pp. 90-91, Tafel 9, 4.2.14.

<sup>32</sup> Of tomb's 1 male and 2 female occupants, the male was buried last, with epitaph dated 653. C11 was in mouth of first female buried. The female who held C13 in mouth was buried second, no later than male's death in 653, but no earlier than 651, the coin's mint yr. See C11 for information and references.

<sup>33</sup> This no. is incorrect. Published photo in Hsia 2: 214-16 definitively identifies coin as 302.25. Furthermore, according to the original excavation report for tomb 332 at Sink. AI, the ID no. for the only silver coin found in tomb 332 was no. 19. In this tomb item no. 14 is actually a wooden object.

<sup>34</sup> JYD only occurs in year 20 Yazdgerd at the mints of Kirmān, Marv, and Rev-Ardashir (Gaube, *Numismatik*, p. 35). Hsia 2: 214-16 mistakes JYD for Pahlavī A[P]D. C13 is similar to Walker's number Th. 1, but is clipped on margin (Walker, *Catalogue of the Arab-Sasanian Coins*, p. 3, plate XXX, no. 2).

<sup>35</sup> Hsia 1:110 gives M(R)=Marv (?). Mint difficult to read due to corrosion, but to the best of my knowledge does not appear to be one that has been published.

<sup>36</sup> Yr. is 661 or 663 if per Arabic calendar, if per Yazdgerd era = 672 or 674. Both calendars known to have been used to date Arab-Sasanian coins of the Khusrav II type. Walker, *Catalogue*, p. xxxvii.

<sup>37</sup> These tombs held severely corroded coins described in Hsia 1:110.

<sup>38</sup> See n. 4, this table, re. C2. The date would be mid-7th c. if tomb is #325.

<sup>39</sup> Mus. staff claim damage done by inexperienced excavators attempting to remove corrosion.

<sup>40</sup> Mint date unreadable, but obv. has 2 rings and rev. 3. One crescent-siar combo visible on rev. These are characteristics of coins minted 590-700 AD under Sasanians and Arabs.

<sup>41</sup> Mid-7th c. if tomb #325; 390-663 if #337. See n. 4, this table, re. C2.

<sup>42</sup> This is incorrect. Museum's no. does not match Hsia's description of coin; Hsia 1: 110.

<sup>43</sup> Tomb has no inscription, but contains docs. dated 647-51. TCWS 6: 100-19.

<sup>44</sup> Anomalous epigraphy suggests that it is a Central Asian imitation of a Sasanian prototype. In a personal communication Michael Alram says that imitations of Hormizd IV are common, but nothing has been published on them.

<sup>45</sup> Kuw: 133-34 gives yr. 1.

<sup>46</sup> Stein purchased coin at Karakhoja. Most probably grave robbers had looted it from the nearby tombs of Astana; Stein, *Innermost Asia* 1: 594-95, 2: 993.

<sup>47</sup> Mint identified according to Gyselen: 133, no. 33. Göbl: 82-83, table XVI, no. 47, reads mint abbreviation as MR=Marv.

#### Abbreviations used in the table and notes:

Sink.	Sinking Museum	obv.	
Sink AI	Sinking Archaeolog. Inst.	Kuw	obverse
Turfan	Turfan Museum	Paruck	"Tōhō ni okeru Sāsān" (see n. 23, main text)
BM	British Museum		Furdoonjee D. J. Paruck, <i>Sāsānian Coins</i> (1924); rpt. New Delhi: Indol. Book Corp., 1976)
T	tomb	Göbl	<i>Sāsānian Numismatics</i> (see n. 3)
rv.	reverse	Gyselen	<i>Deux trésors monétaires</i> (see n. 57)
		Hsia 1	"Tsung-shu Chung-kuo ch'u-t'u" (n. 2)
		Hsia 2	"Hsin-chiang T'u lu-fan (su-chin ch'u-t'u" (n. 14)
		TCWS	<i>T'u-lu-fan ch'u-t'u wen-shu</i> (n. 24)
		HCCT	<i>Hsin-chiang ch'u-t'u wen-shu</i> (n. 1)
		HCWWE	<i>Hsin-chiang Wei-wu-erh tzu-chih-ch'u po-wu-kuan</i> (n. 1)



Table of Fourteen Turfan-Tomb Silver-Coins That Author Was Unable to Locate

\* Unless noted, type nos. in parents under "Descrip'n./Type" follow Göbl, tbs. I-XXII. \* Because of cataloging confusion, some items, below, may duplicate those in previous table of 26 coins.

• Hsia's data are from Hsia 1, p. 110. I have not included Hsia's mint ident's, because they are unreliable (see n. 19, main text).

REF. NO.	DESCRIP'N./TYPE (HSIA DESCRIP'N.)	EXCAV'N. PLACE	MINT MARK	MINT DATE (PER HSIA)	BURIAL DATE	WT. gm. (PER HSIA)	DIAM. mm. (PER HSIA)	ID NUMBER	PHOTOS	COMMENTS (HSIA COMMENTS)
C20	Sasanian Khusrau II / II-2?	Yarkhoto, T6	unable to determine	VR 3-3-019 -595	KCC (ca. 595 640)	?	?	?	Hsia 3: 127, pl. XXXI, B1	
C21	Sasanian Khusrau II / II-2?	Yarkhoto, T56	unable to determine	VR 11-2 -604?	KCC (602-610)	?	?	?	Hsia 3: 127, pl. XXXI, B2	hole through cast near top of human fig.
C22	(Sasanian Perōz, type B; iden. system unknown)	Astana, T115		(450-84)	199-630 <sup>3</sup>	(2.2)	(26)	73TAM115.37		
C23	(Sasanian Khusrau II)	Astana, T118		(VR 25 -614?)	(ca. 640-760)	(2.2)	(29)	69TAM118.01		
C24	(Sasanian Khusrau II)	Astana, T206		(VR 30 -619)	686	(3.1)	(27)	73TAM206-057/2		found in mouth of fem. occupant; her inscription dated 685; TCWS 3: 258
C25	(Sasanian Khusrau II)	Astana, T332		(VR 30 619)	mid to late-7 <sup>th</sup> c. <sup>4</sup>	(2.0)	(30, 31)	60TAM432.019		
C26	(Sasanian Khusrau II)	Astana, T339		(VR 31-2 -620?)	early-7 <sup>th</sup> c. <sup>5</sup>	(1.8)	(31)	60TAM339.043		found on floor of tomb;
C27	(Sasanian Khusrau II)	Astana, T322		(VR 33 -621?)	mid-7 <sup>th</sup> c. <sup>6</sup>	(2.0)	(27)	60TAM322.024		(chipped edges)
C28	(Sasanian Khusrau II)	Astana, T20		(VR 35 -622?)	ca. 706	(2.3)	(27)	64TAM20-27		(chipped edges) Found in mouth of female; 2 docs. under body dated 706, TCWS 7: 363
C29	(Sasanian Khusrau II)	Astana, T73		590-628	ca. 640-760	(3.8)	(30)	60TAM73.22		damaged in removing heavy corrosion! Docs. appear to be from 1st reg. Period; no inscriptions or dates; TCWS 3: 178 <sup>6</sup>
C30	(Sasanian Khusrau II)	Astana, T78		590-628	640-660 <sup>7</sup>	(1.8)	(31)	67TAM78-1		6
C31	Sasanian, Yazdigard III	Astana, T363		632-54	late-7 <sup>th</sup> to early 8 c <sup>8</sup>	(4.9)	(32)	67TAM363.7	photo of obv. in A. ssu-t'ia na 363 <sup>7</sup> ; 10, pl. 4.	Hole through coin near top of human fig.; cv. not published; mint date derived from span of Yazdigard reign.
C32	(Sasanian?)	Astana, T349		(?)	KCC (349, 640); TCWS 3: 355	(3.4)	(31)	60TAM349.013		hole through mouth of human fig. on obv.; found in mouth of corpse
C33	Sasanian	Astana v. 2	?	?	?	?	20	BM Stein [A.XII.1-3]		Stein ID# = Astana v. 2.02; excav. place per Stein, <i>Innermost Asia</i> 2: 646, 653, 664, 665; fragment condition; found in mouth of corpse; missing from BM collection.

NOTES

- Hsia 3: 127; Hsin-chiang shou-chieh K'ao-ku chuan-yeh jen-yuan hsin-lien-pan 新疆首屆考古專業人員訓練班, "Chiao-ho ku ch'eng" 交河故城寺院及雅爾湖古墓發掘簡報, *Hsin-chiang wen-wu* 新疆文物 4 (1980), p. 8.
- Hsia 3: 127; Hsin-chiang shou-chieh K'ao-ku chuan-yeh jen-yuan hsin-lien-pan, "Chiao-ho ku ch'eng," p. 8.
- Funerary inscription dates from the Kao-ch'ang period. Hou Ts'an 侯燦, "Chieh-fang hou hsin ch'u Tu-lu-fan mu-chih lu" 解放後新出吐魯番漢墓誌, in Pei-ching ta-hsueh Chung-kuo chung-ku shih yen chiu chung hsin. 北京大學中國考古研究所中心, ed., *Tu-lu-fan wen-hsueh lun-ch'i* 敦煌吐魯番文獻研究論集 (Peking: Pei-ching ta-hsueh ch'u pan she, 1990) 5, p. 586.
- Joint burial with an unknown number of occupants. Coin found in the mouth of a female. There is no funerary inscription, but documents date from 661-653; TCWS 6: 276-80.
- Tomb had one male and two female occupants; a funerary inscription is dated 626 and one document is dated 620. We cannot associate the coin with a particular corpse because it was found on the tomb floor. Since the funerary inscription is for the male, we cannot say exactly when the females were buried. It is likely that the female occupants of the tomb were the male's two wives, so their deaths probably occurred within a decade or two of the male in the early seventh-century. We can date the coin to this period.
- Coin found in the mouth of one of the tomb's occupants; number of corpses in the tomb not mentioned. There is a funerary inscription dated 653, but until a complete excavation report is published, we cannot be sure that the coin was in the mouth of the person to whom the epitaph is dedicated; TCWS 6: 266.
- Mint date derived from span of Khusrau II reign.
- Tomb contained a husband and wife. The coin was in the mouth of the male. The female appears to have been buried first and has a funerary inscription dated 642. The husband does not have an epitaph, but was wearing paper shoes made with undated Tang administrative documents that must have been written after the Tang conquest in 640. See TCWS 4: 62; Hou, "Chieh-fang hou hsin ch'u," p. 590. We can guess that the coin was buried along with the husband at some time in the 640s or 650s. Hsia dates the funerary inscription as 638, but this appears to be an error. Hsia ch'u," p. 590. We can guess that the coin was buried along with the husband at some time in the 640s or 650s. Hsia dates the funerary inscription as 638, but this appears to be an error.
- There were no funerary documents or inscriptions. Documents were found in the tomb that date from 665 to 710 (TCWS 7: 523). Without the documentary evidence, excavators dated it to ca. 713-11 based on the style of the tomb and its contents (Hsin-chiang Wei-wu-eth tzu-chih-ch'u po-wu-kuan, "Tu-lu-fan A. ssu-t'ia na 363," pp. 8-9).

Abbreviations used in the table and notes:

BM	British Museum	KCC	Kao-ch'ang Ch'ü-family period
Göbl	Sasanian <i>Nismatika</i> (see n. 3 to main text, above)	obv.	obverse
Hsia 1	"Tsung-shu Chung-kuo ch'u-t'u" (n. 2, main text)	rv.	reverse
Hsia 3	"Chung-kuo tsui ch'u fa-hsien te Po-ssu Su-shan" (n. 14, main text)	T	tomb