

THE ECONOMY. PRODUCTION AND TRADE

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Part One

PRODUCTION

Northern areas (Transoxania and the steppes)

Pastoral production

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Geographic conditions

The geographic conditions of the northern zone of Central Asia (deserts, wastelands and steppes) are typified by high insolation, dryness and marked aridity, a continental climate with seasonal differences, long-term climatic variability, periodic droughts and scanty water resources, resulting in seasonal, sparse and stunted growth of vegetation with little nutritive value. The zone forms, in consequence, an extremely fragile ecosystem with a predisposition towards erosion and desertification, and is especially vulnerable to degradation from human activity.¹

Nomadic herding was elaborated over the last three millennia as a distinctive form of exploitation of the natural resources of the arid zone of Eurasia.² One of the main features of the nomadic way of life was the achievement of self-sufficiency within economic units that were small both as regards the numbers of their human members and in terms of their herds.³ Among the main nomad populations of Central Asia should be included the

¹ See, *inter alia*, Rakitnikov, 1970; Murzaev, 1952; 1966; *Kazakhstan . . .*, 1969; Fedorovich, 1973; Pul'yarkin, 1976; Mardkovich, 1982; Radchenko, 1983.

² Markov, 1976; Masanov, 1995.

³ Masanov, 1990; 1995.

Kazakhs, the Kyrgyz, the Turkmen, some of the Uzbeks and the Mongols. In the period of the present volume, the Kazakhs were one of the major nomadic peoples of Eurasia, a people exhibiting to a very high degree all the features of the classic nomadic way of life against which others may be measured. It may be assumed that the numbers of nomadic Kazakhs in the sixteenth to the nineteenth centuries did not exceed 2–3 million, since that figure seems to be the highest possible size of pastoral population in the given territory, sustainable by the environmental resources, notably grazing land. The 1897 census of the Russian empire yielded a figure of 3,392,751 Kazakhs in the present-day territory of Kazakhstan.⁴

The nomadic economy

The year-round pasturing of cattle was the main distinguishing feature of the nomadic economy. Whereas the stabling system was based on bringing fodder to where the cattle were kept, the nomadic system brought the cattle to where the fodder existed. This was conditioned by the low productivity and sparseness of the vegetation (3–5 *centners* per ha; 1 Russian *centner* = 100 kg), the impossibility of making hay and the shortage of fodder and water resources, which excluded any significant concentration of herd animals in a particular area; it was also conditioned by the seasonal nature of the yield of pastures, which necessitated periodic movements of the herds in search of fodder. A sheep annually needed a dry weight of 1,314 kg of desert fodder, 1.5 m³ of water and 20 ha of pasture.⁵ The large size of pasture needed for just one head of sheep shows how low the productivity of land was and how much the herds had to be moved to exploit the land.

The territory occupied by nomads was used by them for winter, summer, spring and autumn pasturing, depending on the environmental conditions. The winter pastures were mainly in the desert zone of southern Kazakhstan, whereas the summer pastures were located in the more northerly parts of the plains or in the mountains. On average the length of the annual migrations did not exceed 50–100 km, although it could on occasion be as much as 1,000–2,500 km, especially among groups of the Baganly-Naiman, Adai, Tabyn and Shekty Kazakhs.⁶ A permanent feature of the life of Kazakh nomads was what has been termed the closed cycle of migration along strictly regulated routes, with permanent winter encampments and a system of wandering in the summer around the same sources of water.

⁴ See *Pervaya vseobshchaya perepis naseleniya Rossiyskoy imperii 1897 g.*, 1897; 1904; 1905.

⁵ Fedorovich, 1973, pp. 217–18; Chogdon, 1980, p. 60.

⁶ Bukeikhan, 1927, p. 66; Ishchenko et al., 1928, p. 106; Briskin, 1929, p. 39; Matskevich, 1929.

The nature of the environment and economic needs determined the composition of the herds and flocks, in which, on average, 60 per cent of all animals were sheep, 13 per cent horses, 12 per cent cattle and 4 per cent camels. Prior to the Russian Revolution in 1917, there were an estimated number of 18–18.5 million sheep, 4 million horses and 3.5–4 million cattle in Kazakhstan.⁷ Herd and- flock management among the Kazakh nomads was conditioned by the adaptive potential of each animal species. Under arid conditions there was a selection of those species, namely camels, sheep and goats, that needed the least amount of water for survival and were able to subsist on the vegetation specific to the arid zone. For example, whereas cattle and horses ate only 109 of the 288 plant species of the desert zone of Kazakhstan, camels ate 148 and sheep 167.⁸

The continental climate determined the selection of species that possessed a winter grazing reflex, as found in horses, sheep and goats, while the need for rational grazing necessitated a herding instinct, also found in horses, sheep and goats. Animals of different species generally grazed separately. They had different requirements regarding the amount and quality of drinking water. Thus, for example, water containing as much as 5 or even 10 g of dissolved salts per litre was suitable only for sheep and camels and, in the short term, for cattle, but quite unsuitable for horses.⁹

The interests of humans conditioned the demand for high productivity of meat, milk, wool, leather and so on, and also for the diversified use of animals, for traction and transportation. The ability of animals to adapt to rapid and frequent migrations played an especially important part in determining the species composition of the herds and flocks. Under the most favourable conditions, flocks of sheep could move 0.6–1.2 km in an hour when grazing and 1.1–1.5 km in an hour when being driven over grass, while cattle could move 0.5–1.6 km in an hour when freely grazing. Watering places could accordingly be 4–5 km apart for sheep, 2–2.5 km for cattle, 5–8 km for horses and 8–10 km for camels.¹⁰

Specific strains of cattle were developed, the distinguishing features of which were a high level of adaptation to the sparse fodder resources, water shortage, climatic variations and rhythmic changes of conditions in the nomadic system, as well as the capacity to put on weight rapidly and restore energy expenditure in the shortest possible time after the exhausting winter period, intensive movements and winter grazing. Among such strains may be mentioned the coarse-fleeced, fat-tailed sheep and the Kazakh ‘*jabe*’ horse.¹¹

⁷ See *Khozyaystvo kazakhov na rubezhe XIX–XX vv.*, 1980, pp. 94–7; Masanov, 1995, pp. 249–50.

⁸ Ivanov, 1973, p. 63.

⁹ *Kazakhstan . . .*, 1969, p. 453.

¹⁰ Chogdon, 1980, pp. 187–95.

¹¹ Barmintsev, 1958; *Ovtsevodstvo Kazakhstana*, 1968; Nechaev, 1975.

To sum up, the cattle-raising economy of the Kazakh nomads may be characterized as diversified and quite sophisticated, almost completely selfsufficient and geared to the satisfaction of the consumer interests of the mobile population.¹² The pastoral economy of the nomads became an essential factor in the shaping of steppe, wasteland and desert landscapes, particularly through determining the pattern of plant growth and mediating substance exchange between the various elements of the ecosystem.¹³

The development of agriculture in the habitats of the nomads was appreciably restricted by geographic conditions, especially by the paucity of soil and water resources and the lack of precipitation. Agriculture in the steppes was therefore entirely dependent on the scope for the establishment of irrigation systems for crops. Consequently, it was always of a subsidiary and secondary nature.

Two main types of pastoral economy may be distinguished: one based on the predominantly natural use of water, and the other on the use of artificial water resources. The first type was found mainly in river valleys in the steppe and wooded steppe zones, in foothill and mountain districts, and in alpine and sub-alpine pastures comparatively well supplied by atmospheric precipitation and surface run-off. The main source of water in the arid regions, in the desert and wasteland zones, was groundwater, to which access was normally secured through wells. A comparatively uniformly spaced network of wells had to be laid out, preferably no more than 10 km apart, and to a maximum of 20 km, where the minimum water stocks had to be sufficient for the daily watering of 200 cattle and horses or 500–600 sheep.

Agriculture

(*The Editors*)

In the northern parts of Central Asia, that is, all regions north of the Hindu Kush and the Karakoram ranges (lying within the former USSR, China and Mongolia), agriculture subsists in narrow strips along river valleys and in the oases. The precipitation is uniformly so low that rainfall cannot sustain cultivation of the soil. This explains why Zahīru'ddīn Bābur (1483–1530), a native of Ferghana, should in his memoirs have noted it as a remarkable

¹² Ishchenko et al., 1928; *Khozyaystvo Kazakhov na rubezhe XIX–XX vv.*, 1980.

¹³ Odum, 1975.

fact that irrigation was not needed for either the autumn or the spring crops in India.¹⁴ In his own homeland, as around Osh, there was an abundance of *āqār-sūs* (canals of running water); and it is on such canals that, as his translator notes, ‘in Turkistan all cultivation depends’.¹⁵ The system of *kārīzs* or *kārezs* (underground channels) that connect lines of wells and then emerge over ground to supply surface irrigation is more a feature of the deserts of Iran and Afghanistan than of countries further north. But they existed in East Turkistan (Xinjiang), though Sir Aurel Stein notes that in the Turfan depression, where there is an extensive network of *kārezs*, they began to be constructed only in the eighteenth century, before which time canals drawn from streams in the snow-fed mountains must have sufficed.¹⁶

Out in the steppes, wells were dug to tap underground water. The historian Mīrzā Haydar Dughlāt, writing in 1544, speaks of the way the Chaghatayid khan, Sultān Vays Khan, trying to cultivate land in the same territory of Turfan, ‘did not get his water from any stream, but having dug a deep well, drew from it a supply of water for irrigation’. Haydar’s informant claimed that he had often seen ‘the khan, during the hot season, with the help of his slaves, drawing water from the well in pitchers and pouring it himself over the land’. The field so irrigated was necessarily small, not yielding even an ass’s load.¹⁷

The crops cultivated in Transoxania included the three major cereals, wheat, rice and barley. The New World crop of maize (Indian corn) was also introduced during the period, though it does not appear to have become important.¹⁸ A new crop, also New World in origin, was tobacco, which began to reach the region in the first quarter of the seventeenth century, when it was banned in both Iran and India, though to no great effect.¹⁹ In the early nineteenth century the tobacco grown around ‘Kurshu’ (Karshi) was held to be superior to that of other localities in the emirate of Bukhara.²⁰

Alexander Burnes gives an interesting list of prices of agricultural products at Bukhara in 1833 (Table 1), which enables us to establish their relative values (given the same quantities).

Comparing these with the prices at the Indian emperor Akbar’s court (Lahore, 1595), as well as those at Lahore in the latter half of the nineteenth century, as worked out by

¹⁴ Bābur, 1995, p. 932; 1922, Vol. 2, p. 486.

¹⁵ Bābur, 1995, p. 5; 1922, Vol. 2, p. 5 and note.

¹⁶ Stein, 1981, Vol. 2, pp. 568–9.

¹⁷ Haydar Dughlāt, 1898, p. 67.

¹⁸ See Burnes, 1834, Vol. 2, p. 169, where it appears on his list of crops of Bukhara; but he does not consider it important enough to include it among the grains whose prices he provides on the next page.

¹⁹ On the ban imposed by Shāh ʿAbbās I of Persia and Jahāngīr in India, see Jahāngīr, 1863–84, p. 183.

²⁰ Burnes, 1834, Vol. 2, p. 169.

Moosvi,²¹ one finds that barley and *juwari* bore about the same proportion to wheat in value, while gram was much more expensive in Bukhara. (Burnes probably quotes the price of higher-quality gram, known as ‘Kabuli gram’ in India; and this would explain the difference.) The price of ghee in 1833 at Bukhara was higher than in 1595 at Akbar’s court, but lower than in India in the latter half of the nineteenth century.

What is of clear significance is the high price of sugar at Bukhara. With the wheat price as 100, the sugar price in 1595 at Lahore was only 1,066, while in the 1860s in northern India, it was generally below 700. In 1833 at Bukhara, as we see above, sugar was no less than 5,100, i.e. over 50 times the value of wheat. This was probably because there was practically no sugar-cane cultivation in Transoxania.²²

Cotton was pre-eminent among industrial crops. Burnes notes that ‘the cotton plant is extensively cultivated’ around Bukhara and that Bukhara exported both raw cotton and cotton textiles.²³ Stein suggests that the laying out of *kārez* networks in Turfan from the eighteenth century onwards became possible because cotton production gave sufficient returns to render expenditure on them economically feasible.²⁴ Cotton-growing was, however, to receive its greatest impetus only after the Russian conquest, so that by 1900 it accounted for

Table 1. Relative values of agricultural products sold at Bukhara, 1833

Wheat	100
Barley	70
Rice (best)	275
Rice (coarse)	222
<i>Juwari</i> (millet)	80
Gram (chickpeas)	140
Mung (lentils)	106
Sugar	5,100
Ghee (clarified butter)	1,092

Source: Burnes, 1834, Vol. 2, p. 170.

Note: The prices are given in terms of quantities purchased with 1 Indian *sicca* rupee (East India Company rupee); wheat was sold at approx. 23 kg per rupee.

²¹ Moosvi, 1987, p. 324.

²² Burnes, 1834, Vol. 2, p. 173, accordingly suggested that sugar might be extracted from the molasses obtained from melons.

²³ Burnes, 1834, Vol. 2, p. 166.

²⁴ Stein, 1981, Vol. 2, pp. 568–9.

as much as 30–40 per cent of the cultivated acreage ‘in most regions’ of Russian Turkistan (West Turkistan).²⁵

The Transoxanian region produced many varieties of fruit. The district of Andijan in Ferghana produced ‘fruit in abundance, excellent grapes and melons’, as Bābur records in his memoirs.²⁶ Burnes, writing some 300 years later, speaks of the celebrity of the fruit of Bukhara, though adding that this was ‘more from quantity than quality’.²⁷ In the Kashghar region, fruit, especially pears, was similarly plentiful, so much so that in autumn it was not sold, but could be plucked freely by anyone.²⁸ Indeed, fruit, particularly melons, formed part of the staple diet of people of Transoxania for several months of the year.²⁹ Almonds in a locality called Kand-i Badam in Ferghana, on the other hand, were grown for long-distance trade, being carried to Hormuz and India.³⁰

Sericulture was also extensively practised in the region. Burnes found that every stream was lined with mulberry plants; the worm was univoltine, the silk being reeled off the cocoons in June. Besides the emirate of Bukhara, the Kokand (Khoqand) khanate also produced silk, though of an inferior quality. Silk was exported from Bukhara to Kabul and India.³¹

Handicrafts

(*K. M. Baipakov*)

The historical literature contains two opposing assessments of handicrafts in Central Asia: the first of these holds that handicrafts underwent a decline in the sixteenth century, whereas the second considers that there was a noticeable development of handicrafts, trade and agriculture. There is also an opinion that reconciles these two views on the assumption

²⁵ Lyashchenko, 1949, p. 609. The degree of extension of cultivation of cotton can be seen from the fact that Bābur, while describing the district of Andijan, mentions ‘much grain’ being produced by it, but has no reference to cotton (Bābur, 1995, p. 4; 1922, Vol. 1, p. 3). Yet by about 1900 as much as 70–85 per cent of the cultivated acreage in this district was under cotton (Lyashchenko, 1949, p. 609).

²⁶ Bābur, 1995, p. 4; 1922, Vol. 1, p. 3*n*.

²⁷ Burnes, 1834, Vol. 2, pp. 166–73.

²⁸ Haydar Dughlāt, 1898, p. 303.

²⁹ See authorities cited by Bābur, 1922, Vol. 1, p. 3*n*.

³⁰ Bābur, 1995, p. 8; 1922, Vol. 1, pp. 8–9.

³¹ Burnes, 1834, pp. 179–80.

that there were some positive developments in handicraft production and in trade. Even so, production techniques remained largely unchanged and trade tended to run along customary lines. Nor were there any appreciable changes in the quality of the goods produced.

Despite the consolidation of state authority in the seventeenth and eighteenth centuries, it is evident that commodity production was adversely affected by the continuing civil strife and wars, which aggravated the decline in production both in the cities and towns and out in the steppes. Output was also stifled by taxes on land, handicrafts and trade and by the lack of guarantees for private property.³²

The organization of handicrafts

The town had always had an important position in the structure of society. Its numerous functions included handicrafts production, both for internal urban consumption and for international trade, as well as with the surrounding countryside and the steppe. The nomadic inhabitants of the steppe were also important commodity producers. During the period under consideration, production developed on the basis of manual labour, and improvements in the implements in use proceeded at a very slow rate. Some of the implements used by craft workers, the origins of which date back to very early times, have survived almost unmodified down to the present.

The major handicraft centres of Herat, Merv, Bukhara, Samarkand, Khiva, Tashkent, Otrar and Kashghar retained their leading positions in the period. Among those which now came into prominence were Khiva, Kokand, Andijan, Shahrukhiya, Chimkent, Turkestan (Yasi) and Sauran. Written sources contain information on blacksmiths, turners, locksmiths, coppersmiths, cutlers, jewellers, armourers, paper-makers, weavers, dyers, shoemakers, carpet-makers, tailors, potters, builders, brick-makers, furriers, bakers and grocers. Further degrees of specialization may be noted within these crafts. Craft workers of the leading professions frequently inhabited specialized quarters within towns. Bukhara, for example, is known to have had quarters bearing trade names, such as the quarters of the cauldron-makers, needle-makers, potters, tanners, soap-boilers, furriers, etc.³³ Jewellers usually lived near the centre, whereas potters, tanners and mat-makers were located in the suburbs, close to running water; blacksmiths were to be found at the entrance to the city or town; and paper-makers and charcoal burners outside its limits.

Craftsmen were generally grouped into occupational craft guilds. Each guild was headed by a guild master, whose appointment was approved by the authorities. The guild master

³² Gafurov, 1972, pp. 533–40, 567–8; *Istoriya Kazakhskoy SSR*, 1979, Vol. 2, pp. 331–4; Vol. 3, pp. 13–21.

³³ Sukhareva, 1976, pp. 278–80.

supervised the quality of the goods made by the craftsmen of his guild, ensuring compliance with accepted standards, was responsible for the apportioning and collection of taxes and laid down prices.

The *ustād* (master) was a key figure in the guild. Barthold tells us that:

the Persian word *ustād* has been incorporated into Arabic and occurs ubiquitously in secular and religious writings; furthermore, the same word *ustād* was used not only for instructors and men of science, but also for master craftsmen who taught their apprentices their art or craft, and for the trusted advisers of rulers.³⁴

During the sixteenth–nineteenth centuries the term *ustād* was used mainly to denote a highly skilled craftsman, one who passed on his experience and knowledge to his son or sons and, in their absence, to an apprentice from outside the family.

The master craftsman might not necessarily play a direct part in the production process, but might merely supervise it. Such craftsmen usually occupied a privileged position within their trade and tended to be wealthier than the other craftsmen. For example, a document from Samarkand dating back to the second part of the sixteenth century or the early seventeenth century contains an account of the property of Tangri Berdi, a deceased *ustād*, whose estate comprised a house with outbuildings and a courtyard, a mill, two male and two female slaves, a horse, cash in hand amounting to 200 gold *tangas*, 400 lengths of cloth, 200 kg of silk and a workshop (*kārkhāna*). The list of his debtors included spiritual leaders.

The vast majority of master craftsmen were, however, personally engaged in the business of production and belonged to the middle and poor strata of the urban population. Jewellers, armourers, metal-workers and weavers were usually among the more prosperous craftsmen, while mat-makers tended to be the poorest. A master craftsman would have assistants and one or more apprentices. The procedure for taking on an apprentice was either for the master and the apprentice to enter into a verbal agreement or for written articles of apprenticeship to be drawn up. There might also be hired workers, who performed specified tasks for payment and lived in the master's house.³⁵ Some master craftsmen, usually guild masters, bought up goods and supplied raw materials, and were money-lenders. We know from written sources that wealthy merchants and money-lenders bought up workshops and leased them out.³⁶

Many musicians, poets, artists and historians came from the community of artisans, especially from among the better-off craft workers. They lived on what they earned from

³⁴ Barthold, 1963, p. 224.

³⁵ Mukminova, 1976a, pp. 45–68.

³⁶ *Istoriya Tajikskogo naroda*, 1964, Vol. 1, pp. 401–3.

playing musical instruments, writing verses, drafting petitions and painting miniatures or from their skill as calligraphers. Such people were for the most part not particularly well-off and often relied on the patronage of town dignitaries and rulers. The poet ^cAlīshīr Nawā'ī (1441– 1501) wrote of musicians and singers that ‘although the practitioners of this craft are jolly, warm-hearted people, they are in fact paupers [he who plays and sings, lives on charity]’.³⁷

There were also some craftswomen, the majority of whom were engaged in the processing of raw materials and the preparation of component parts. Sometimes, however, women carried out the entire process from beginning to end, in which case the title of their occupation was appended to their name. Thus, for example, one late-sixteenth-century source refers to a certain Sa^cādat Sultān *Mu'īnadūz*, daughter of ^cAbdullāh, who was a furrier.³⁸

Individual crafts

METAL-WORKING

Metal-working can be divided into seven independent branches: blacksmiths and locksmiths/metal-workers, including blacksmiths making *ketmenis* (grub hoes) and axes; horseshoe-makers; locksmiths; cutlers; tinsmiths; needlemakers; and nail-makers. Miniatures in a sixteenth-century manuscript depict a smithy with a forge, bellows, anvil, mallets and tongs.³⁹ There would usually be at least three people working in a smithy. In addition to the master craftsman, who carried out the most crucial shaping operations, there would be the striker, an apprentice who worked the bellows and a master finisher.⁴⁰

Archaeological finds from the cities and towns of Central Asia include a wide range of objects made by sixteenth- and seventeenth-century metalworkers, such as horseshoes, locks, nails and chains.⁴¹ In one of the houses excavated at Otrar (in Kazakhstan) there lived in the late seventeenth century a metal-worker whose job was connected with the smelting and shaping of iron. An ash-pit, fragments of the partly fused walls of a blooming furnace and some 200 kg of pig-iron were uncovered in one room. A pit full of charcoal, one of the essentials for a smithy, was uncovered in another room. Forged ploughshares were found in a store.

³⁷ Navoi, 1970, p. 34.

³⁸ Mukminova, 1976b, pp. 50–1.

³⁹ Galerkina, 1956, Vol. 11, No. 2, pp. 228–30, 232.

⁴⁰ Sukhareva, 1962a, p. 32.

⁴¹ Akishev et al., 1972, pp. 166–9, Figs. 83–9.

IRON-FOUNDING

Iron-founding had two main branches: the moulding of ploughshares and the casting of various household objects. Master founders usually lived in the suburbs, and it was most unusual to find them in the town itself, because the practice of their craft required a large amount of space.⁴² References to an ironfoundry in Samarkand are found in sixteenth-century documents. The record relates to the apportioning of the estate of a deceased iron-founder, Mullā Nawraz. Mention is made of a workshop and a quantity (4 *mannas*) of castiron valued at 16 *tangas*.⁴³ The output of the iron-founders consisted largely of ploughshares, wheel hubs, cauldrons and lamps, with the addition of portable pan braziers (*mangals*) for room heating. Some lamps and braziers were decorated with openwork patterns and were highly artistic wares.

We know from recent field observations that casting was usually carried out twice a month and that the intervening periods were taken up with preparatory work. The casting process went on round the clock in a special furnace into which air was fed continuously. At least 9 people took it in turns to pump the bellows and there were 5 casters who poured the iron into the moulds. The whole process employed up to 30 people and as many as 1,200 ploughshares could be produced in a single casting shift.⁴⁴ Interesting material on casting has been obtained from excavations at the site of Otrar, where numerous castings were found of wheel hubs, fragments of cauldrons and ploughshares.

COPPERSMITHING

Coppersmithing was not a craft with separate branches, but there were some coppersmiths who specialized in the making of particular wares. For example, in the making of copper tableware, some smiths specialized in water jugs, while others made bowls, trays or small jugs for tea. Cauldrons and candlesticks were also made of copper. The best such wares were decorated with engraving and punch-work. The ornamentation was usually floral, geometric and epigraphic. Use was also made of the techniques of decorating wares by incrustation with red copper, silver and gold, predominantly by the 'cold ramming' process. Depending on the alloying additives, the copper was either red (bronze) or yellow (brass).

Traditional Central Asian bronze casting was also developed. Casting was also used in the manufacture of *mangals*, sometimes with openwork patterning, and in that of door-knockers and openwork plates, belt buckles, buttons, inkwells and ornamented jug handles.

⁴² Mukminova, 1976a, p. 110.

⁴³ Sukhareva, 1962a, p. 33.

⁴⁴ Ibid., pp. 34–5.

The casting of small bells and of *pellets*, bells fastened to the legs and necks of camels and other domesticated animals, was a separate craft. Small bells with a melodious sound were made for dancers. Moulds in two halves, known as *qālibs* (stamps), were used for casting.⁴⁵

Apart from privately owned workshops there were also public workshops in the large cities and at the courts of the khans and the emir of Bukhara, making wares for court use.

JEWELLERY-MAKING

Jewellers working on commissions from the uppermost strata of society produced some magnificent works of art such as, for example, the famous royal crown and gold belt that reportedly belonged to ʿAbdullāh Khān Uzbek (1557–98). The court jewellers' workshop was still functioning in Bukhara late in the nineteenth century.⁴⁶ Gifts for the rulers of neighbouring cities and countries were also made in such workshops. Gold and silver goblets were presented to Muhammad Shaybānī Khān (1500–10). Among the presents that were taken in 1585 by the envoy of ʿAbdullāh Khān to the Russian tsar Fyodor Ivanovich, mention is made of a gold-plated goblet with floral ornamentation.⁴⁷

The jewellers made extensive use of precious and semi-precious stones such as rubies, emeralds, pearls, cornelian, turquoise, jasper, fire opal, agate and rock crystal. Gold was obtained from the mountains of Ferghana, and also from Taraz and Khuttalan. It was also mined in the Zartalash mountains to the east of Tashkent. The city of Khotan in East Turkistan was famed for its jade workings.⁴⁸ Some jewellers specialized in making rings, others concentrated on earrings or filigree work, but there were also some who produced all kinds of ornamental jewellery for women.

The jewellers knew various methods of working with precious metals such as wire drawing, hammering, stamping, engraving, embossing, gilding, incising, niello-work and granulation. It should be noted that the granulation casting technique is an art that had been lost by European jewellers, but was retained and developed right down to the early years of the nineteenth century in Bukhara, Samarkand and Tashkent and among the Kazakhs and the Turkmens. Rings, finger rings and amulets were also cut from semi-precious stones like nephrite, crystal and cornelian. Jewellers made richly ornamented horse trappings and saddles trimmed with openwork silver plates. The Kazakh and Turkmen jewellers of Mangishlaq (Manqeshlāq) made beautiful silver ornaments for women, which they decorated with granulation, niello-work, filigree and coloured stone insets (see Chapter 20).

⁴⁵ Sukhareva, 1962b, pp. 36–40.

⁴⁶ Ibid., p. 53.

⁴⁷ MIUTT, 1932, p. 98.

⁴⁸ Bogoyavlensky, 1906, p. 120. See Ch. 7 in the present volume.

ARMOURIES

The armourers' craft was pursued in the cities and towns as well as the steppes, although the most important centres for the manufacture of weapons and armour were in large cities like Samarkand, Herat, Bukhara and Tashkent. Swords, sabres, daggers, pole-axes, clubs, armour and helmets were made in specialist workshops.

Authors who have described the weapons and equipment of soldiers in the armies of Timur and the Shaybanids, and of city- and steppe-dwellers, do not note any particular differences between them. All were equipped with bows and arrows, daggers and swords and had the protection of body armour. Cavalry and infantry both used bows and arrows. 'His bow is strong, his arrow long... ', wrote Bābur of one of the Timurid princes.⁴⁹ Only the possessor of a weapon could be regarded as a full member of society among the Kazakhs.⁵⁰ The bow and arrow continued to play an important role even after the musket was included in the troops' equipment.

Craftsmen made bow cases and quivers of leather ornamented with silver decorations and precious stones for the nobility and plain ones for the rank-and-file troops. Shields were made of wood covered in leather and metal plates. Chain mail and sheet armour and a helmet protected the body and head against cold steel and firearms. Part of the body and head of the horse of the richly equipped warrior was also covered in armour.

There were also craftsmen who made muskets and cannon. Bābur, for example, had a master craftsman, °Alī Qulī, who cast cannon.⁵¹ The troops of the khan of Khiva in the mid-nineteenth century had 'quite a few cannon'.⁵²

WEAVING

Written sources provide us with a great many names for the types of craft workers who were engaged in the manufacture and finishing of the various kinds of fabrics (cottons, silks and woollens), the names of workshops, stalls and bazaars, and also lists of the textiles themselves and the articles made from them. While the production of cloth from cheap cotton thread was largely concentrated in agricultural districts, better-quality cotton textiles with polychrome stripes were produced by urban weavers. Much of this cloth was woven in settlements near Bukhara, and in Samarkand and Urgut. *Karbās*, or calico, was the commonest cotton fabric. A relatively cheap cloth, it was snowwhite or grey, but could be dyed black, blue, yellow, green, grey or violet.

⁴⁹ Mukminova, 1976a, p. 115.

⁵⁰ Kurylev, 1978, pp. 4–22.

⁵¹ Mukminova, 1976a, pp. 121–223.

⁵² Nebol'sin, 1855, p. 8.

There was also an ancient tradition, dating back to before the Arabs, of the production of silk cloth. Sixteenth-century sources contain much information on the production of various silk cloths in Bukhara, Samarkand, Herat, Khiva, Tashkent and other centres. Striped cloth known as *alācha* (variegated) was made in Bukhara and Samarkand. Although *alācha* was typically produced from silk, there are indications that it was also made from cotton. A fine, semi-transparent silk cloth called *fūta* is known, but there are also references to woollen *fūta*. Silk cloth known as *tāfta* (taffeta) and produced by weavers was used to make turbans. Silk *zandānīchī* (fine cotton or silk) in various shades was popular in many countries.

Calico printers produced a cloth known as *chīt* (chintz). Patterns were produced on cloth, including calico, by hand-painting by blocks or stamps (*qālibs*) dipped in a solution of dye. Red, variegated and seven-coloured varieties of *chīt* were known in Samarkand in the late sixteenth century. Velvet (*makhmal*) was in great demand for the garments of aristocrats. It was also used for bedspreads, curtains and pillows. A special kind of raspberry velvet was made in Samarkand.⁵³ Damask (*kamkhāb*) was a costly silk fabric used only by the nobility. The production of very fine transparent silk scarves was a distinctive development in Bukharan textiles. Woollen cloth, including *saqirlāt*, a fine red wool fabric, was also produced in Central Asian cities.⁵⁴

CLOTHING MANUFACTURE

The development of clothing manufacture was stimulated by the demand for ready-made garments among the populations of towns and settlements and the nomads. The garment-makers produced different types of robes as outer garments. These quilted garments, made with half-silk and cotton wadding, were bought by city-dwellers and often by nomads. Expensive robes were made of silk decorated with precious stones. Some cost a fortune. There is, for example, an account of a robe in Herat in the sixteenth century that cost 30,000 *tenges*.⁵⁵

Shirts, dresses and trousers were other commonly made garments.⁵⁶ The garment-makers produced sheepskin winter jackets and coats; they also made jackets and coats of costly furs topped with satin for the gentry. Most sheepskin coats were made for sale to steppe-dwellers; and large numbers of such coats were made in Khwarazm. There were also craftsmen who were expert makers of caftans, evidently of the sheepskin-coat type, among the

⁵³ *Bābur-nāme*, 1958, p. 62.

⁵⁴ Mukminova, 1976a, p. 73. For textiles, see also Ch. 21 in the present volume.

⁵⁵ Mukminova, 1976a, p. 127.

⁵⁶ Pugachenkova, 1956, pp. 85–111.

nomadic peoples. Kazakhs made splendid leather caftans that were even on sale in the large cities.⁵⁷

The outer garment of noble Uzbek and Kazakh nomads was a fur jacket made of red fox, otter, ermine, squirrel and sable pelts. The shirt was made of fur in preference to cloth, and during cold winter spells a topcoat of sheepskin or fur was worn over all other garments, along with a fur cap. Mongol hats and robes of quilted Chinese satin were popular in nomadic society.⁵⁸

Craftsmen produced fur hats and skullcaps (*tubetey kas*). Conical hats were made in Bukhara from karakul fleece, with a rim band of otter fur and a fox-fur or lambswool lining. Kazakh craftsmen made fox-fur hats known as *malkhays*, while Turkmens made tall hats known as *telpekis* from black and white sheep fleece. Skullcaps from different districts differed in shape and pattern. Those from Bukhara were firm and conical in shape and were made from beautiful and costly fabrics – silk and velvet trimmed with a decorated band of ribbon. Small, soft skullcaps were also fashionable for wear under a fur hat.

The belt was an integral part of male dress and one that, depending on the wearer's social standing, might be of cotton fabric or of costly gold brocade. Gold embroidery on garments, and parts of garments, should be distinguished as an applied art. Gold embroidery was applied to the robes of both men and women, and less frequently to shirts for women, skullcaps, women's hats and scarves, and footwear.⁵⁹ Such embroidered clothing was worn by khans, emirs and the higher court nobility.

TANNING

There were two types of tanners, those who produced shagreen leather and those who produced all other kinds of leather. The latter category included craftsmen skilled in the production of leather soles and uppers and coarse suede. The tanners in Bukhara who produced shagreen leather lived in the city centre. Their raw material came from the hides of asses and horses, of which they used only the part from the hindquarters (crupper).

SHOE-MAKING

Shoe-making was one of the developed crafts; shoe-makers were to be found in most quarters of the city. Some of them made soft-soled shoes, while others made hard-soled boots

⁵⁷ Sultanov, 1970, p. 49.

⁵⁸ Mukminova, 1976a, pp. 129–31.

⁵⁹ Sukhareva, 1962a, p. 117.

and leather overshoes. Green shagreen leather was used for shoes and as a facing for the corners of leather trunks.⁶⁰

DYEING

Dyeing played an important part in the production of textiles. Fabrics were mostly dyed with vegetable dyes, which imparted both depth and fastness. The production of vegetable and mineral dyestuffs required a knowledge of chemistry. The recipes for dyes were handed down from generation to generation and were closely guarded secrets. We know the names of some of the craftsmen who acquired a reputation for their dyes. For example, Mullā Mīr Muhammad Husayn was designated as a master craftsman by order of the Shaybanid °Abdu'l °Azīz Khān (1645–80). He mixed compounds in the same way as medicines were made up and he was capable of producing shades said to be reminiscent of the colouring of a peacock.⁶¹

The use of dyes was not confined to weaving; they also found applications in pottery, in paper-making and in leather production. Dyes were used to decorate wooden saddles and as cosmetics. Madder (known as *royān*) was one of the commonest vegetable dyes. Red and yellow dyes were produced from the root of the madder plant. Various shades of blue were obtained from indigo (*nīl*). A blue dye was also obtained from lazurite. Deep violet and purple dyes for silk and other wares were obtained from *baqqam* wood. Orange and yellow were produced from natural saffron. A red dye for costly fabrics was made from an insect (*Kermes ilicis*). Pomegranate bark, onion skins and tea were also used as dyestuffs.

PAPER-MAKING

Paper-making in Central Asia developed over a period of many centuries, from the time when paper-making skills were acquired from the Chinese in the eighth century by the craftsmen of Samarkand.⁶² During the sixteenth and seventeenth centuries paper was made in many cities of Central Asia, such as Tashkent, Herat, Kokand and Khotan. Bāburinspected 'paper-mortars' (*juazi ikaghazlar*) in the suburbs of Herat in 1506–7.⁶³ The paper-making industry in Samarkand declined in the eighteenth century, but flourished in Kokand. Most eighteenth- and nineteenth-century manuscripts were written on paper made in Kokand.

⁶⁰ Sukhareva, 1962a, pp. 107–11.

⁶¹ Mukminova, 1976a, p. 80.

⁶² Khabibulaev, 1990, pp. 60–71.

⁶³ Bābur, 1922, Vol. 1, p. 305.

Paper was also made in Tashkent, as evidence of which we have the direct statement of the Siberian Cossack Maksimov that 'writing paper is made in Kokand and Tashkent'.⁶⁴

The paper of Kokand and Tashkent was made from cotton fabric with no additions. The secrets of manufacture of special quality paper were handed down from generation to generation, from father to son, over the course of many years of work in the same workshop. The high labour-intensiveness and the comparatively small amount of paper made in Central Asia meant that it was unable to withstand the competition of machine-made paper in the latter half of the nineteenth century. The paper-making industry went into decline and ultimately perished.

THE ART OF THE POTTER

Much is known of pottery made during our period in Central Asia. In Otrar a potters' district has been excavated that dates back to the end of the sixteenth and first half of the seventeenth century. The largest of the workshops had an area of 105 m². Its working premises consisted of five rooms, in one of which there was a kiln. Next to it was a storeroom, with three compartments for storing clay in one of the walls. This part of the workshop was heated and operated in the winter. The summer work area, where there were two kilns, was partly covered by a light canopy. The floor area beneath the canopy was paved with baked brick. A pit some 1.5 m in diameter intended for a potter's jigger has been uncovered here.

The workshop had a further two rooms. It may be assumed that one of them was used for mixing potting clay. A millstone, a stone crucible with potash globules, vitreous slag, small formers for the shaping of pots and a clay 'palette' for colours have been found during the excavations. The workshop could have had two, or even three owners, whose houses stood opposite to it in the same district. Proof that the owners of the three houses were connected with the production of ceramics is provided by the discovery of implements for making pottery in all of them. Individual pottery workshops have also been found in other districts of seventeenth-century Otrar.⁶⁵

The tools of the potter have remained the same from the late Middle Ages down to modern times. They consist of pieces of broken pottery (bone plates have been found in Otrar) for levelling the edges of the pot, mushroom-shaped forms of various sizes, stone boat-shaped vessels for melting the glaze and pestles for pounding the glaze.⁶⁶

⁶⁴ Potanin, 1860, p. 28.

⁶⁵ Akishev et al., 1972, p. 29.

⁶⁶ Ekimova, 1959, pp. 351–2, Figs. 8, 18; Dzhabbarov, 1959, Fig. 9.

We know that potters were members of a craft guild from the fact that guild charters (*risālas*) have survived. Craftsmen from Khwarazm (Khāwrazm) belonging to the same profession called themselves an *ulpagar*, or trade association. The head of the guild, known as the *kalāntar*, was elected at a guild meeting. Guild leaders in Ferghana had the titles *bābā* and *aksakal*.⁶⁷ The same terms were used in Samarkand.⁶⁸ It is interesting to note that shards of pitchers found in the layer of the first half of the nineteenth century in excavations in Turkestan (Yasi) bore the impressions of stamps, one of which bore the name of the craftsman, Yūnus, while the other had his name and his title, *kulāl-i kalān* (senior potter).⁶⁹

There are indications of the specialization of production. Wares of a particular kind – water jars, two-handled jugs and pitchers, and glazed crockery – were the main saleable commodities made in the Otrar workshops. The archaeological evidence is corroborated by modern observations of traditional pottery production in Central Asia.⁷⁰

Great diversity and variations in shape, colour of glaze, paints and elements of the designs painted with them were marked features of the wares of master potters. Such wares started to become fashionable in the fifteenth century, when porcelain with bright blue cobalt decoration was first imported from China. Potters in Central Asian cities produced imitations in large quantities.

The techniques of the potter underwent certain changes in the sixteenth century and the first half of the seventeenth century. Alkaline glazes became the dominant types. Cobalt oxide and the oxides of manganese, sodium, potassium, zinc and aluminium were used in painting decorations. Cupric oxide was used, but the oxides of chromium, nickel and antimony fell into disuse.⁷¹

At the close of the seventeenth century ceramic wares with a dull glaze that looked dry and uneven appeared alongside wares covered in high-quality glaze and with rich decoration. The explanation lies not in some change in the chemical composition of the glazes, but in the techniques used in the preparation of their constituents. Some stagnation, however, is to be noted in the production of ceramic wares.⁷²

In the nineteenth century the ceramics industry went into decline as a result of the penetration into Central Asia of porcelain from Russia and Europe.

⁶⁷ *Istoriya narodov Uzbekistana*, 1947, p. 32.

⁶⁸ Peshchereva, 1949, p. 34.

⁶⁹ Smagulov and Nastich, 1983, pp. 45–50.

⁷⁰ Ekimova, 1959, p. 347; Dzhabbarov, 1959, pp. 394–5.

⁷¹ Teplovodskaya, 1983, pp. 200–5.

⁷² *Ibid.*, pp. 205–6.

BUILDING

The erection of ordinary dwellings and the palaces of rulers, *madrasas* (colleges for higher instruction in the religious and other sciences), mosques, mausoleums, fortified city walls, caravanserais, baths, bridges and aqueducts demanded different kinds of engineering skills. The terminology used to denote builders in written sources from the sixteenth to the nineteenth century is quite varied and includes specialists referred to as architects, estimators (who were also designers of buildings), plasterers, bricklayers, craftsmen who produced tiles as cladding, stone carvers, alabaster burners and carvers, art decorators, stonemasons and carpenters.⁷³ Specialists in the construction of domed roofs were always renowned. Alabaster carvers had to have the high qualification common to all stonemasons, in addition to a knowledge of ornamentation and its construction, and of carving techniques. Carpenters, who worked with stonemasons, carried out all work involving wood: the making of wooden parts, beam roofing and flooring, the hanging of doors and the carving of door panels and shutters.

A great deal of building work was carried out in Bukhara in the second half of the sixteenth century, when trading premises, *ribāts* (defence posts) and *sardābas* (covered water reservoirs) were built. There are also references to building work at that time in Samarkand, Herat and Khiva and in provincial towns. For example, al-Wāsifī, the renowned diarist and poet, who was living in Samarkand in 1512–13, reports the building in the sixteenth century in Sauran, a town on the Syr Darya (Jaxartes) river, of a mosque with two ‘swaying minarets’, two *kārezs* supplying water to the park, and fortifications around its sources. All this work was carried out on the orders of ʿAbdullāh Khān.⁷⁴ Archaeological research leads us to conclude that fortified walls were built in the sixteenth century around Sauran, Turkestan and Otrar.

FOODSTUFF PROCESSING

The processing of foodstuffs for sale was widespread in the towns, and to a much lesser extent found also in the countryside and on the steppes. Flour milling was one of the most important of these industries. There are frequent references to mills in sixteenth- and seventeenth-century documents. Archaeologists have recorded the remains of water-mills. In the absence of water, millstones were operated by horses and asses. Such millstones are

⁷³ Mukminova, 1976a, p. 137.

⁷⁴ Boldyrev, 1957, pp. 159–61.

frequently found in excavations. To judge by documents for the years 1727–8 there were mills in Bukhara, since reference is made to the Chahār Kharās ('Four Ass Mills') district.⁷⁵

Many town-dwellers were occupied in the making of flat cakes of unleavened bread. Some of them owned large bakeries. Bread-sellers had their own quarters in the towns. One such specialized district has been excavated in Otrar, revealing a seventeenth-century building complex. There were oil mills in which vegetable oils were processed in the towns. In the first half of the eighteenth century there were oil manufacturers in the Sar-i Pul-i Raughangarān quarter of Bukhara. There were also urban slaughterhouses and butchers' shops. Special professional cooks were employed to prepare food for festivities, weddings and funeral repasts. Confectioners made sweets and halva. Dried grapes, melons, apricots, grape syrup, roast pistachios and apricot kernels were prepared for sale in the villages.

Small craft industries

In addition to the major branches of craft production, there were a great many small craft industries. They included the making of articles from wood, and the making of spades, forks, hoops, saddles for horses, trunks and cartwheels. There were also craftsmen who made reed and chee-grass mats as floor coverings for houses and yurts. This craft had been practised from time immemorial by the nomadic peoples, and tradition has it that even the master rush-mat weavers of Bukhara were the descendants of Uzbeks from Khwarazm and of Turkmens.⁷⁶

Southern Central Asia

(*S. Moosvi*)

The area that will be explored for its products in this section broadly corresponds to areas that fall within the boundaries of the four modern states of the Islamic Republic of Iran (north-eastern parts), Afghanistan, Pakistan and India (north-western parts). In the sixteenth and seventeenth centuries this region was shared between the Safavid empire, the Uzbek khanate and the Mughal empire, while in the eighteenth (at least under Ahmad Shāh,

⁷⁵ Sukhareva, 1962*b*, p. 120.

⁷⁶ *Ibid.*, p. 134.

d. 1772), it belonged almost entirely to the Afghan empire. But while political boundaries have shifted, geography has determined a division into certain regions, each with distinct physical characteristics, which has often transcended political realities.

The first region discussed is Kashmir, which here we take to include the entire mountainous region south of the forbiddingly high Karakoram range and not just the broad vale of Kashmir. The second region, and the largest in terms of population, is that of the Indus plains extending from the Himalayan foothills to the Arabian Sea. The third is that of the Afghan highlands, which contain mountain ranges, from the Hindu Kush and Koh-i Baba to the Sulaiman range, successively radiating from a centre in the Pamirs and ending in a great semicircle in the south-west, beyond which is an extensive arid plateau. Two other regions can be identified adjacent to the rim of the highlands: in the south, the Helmand basin containing narrow bands of cultivated land along the Helmand and its tributaries, but broadening near the Helmand delta; and, further north-westwards, Khurasan proper, watered by rivers from both the Afghan and Khurasan highlands such as the Murghab and the Hari Rud, with Herat and Mashhad as its major urban centres. Finally, we have the areas north of the Hindu Kush, easily divisible, again, into two regions: the mountainous area to the east, which may be conveniently designated Badakhshan, and the sub-Amu Darya plains in the west, whose most prominent centre in our period was Balkh.

Kashmir

The French traveller François Bernier, during his visit to the valley in 1663, noted the 'luxuriant foliage' that surrounded its villages and hamlets. Official Mughal statistics of Aurangzeb's reign (1659–1707) put the number of villages of Kashmir at about the same as recorded for 1909. However, one has no means of judging what the extent of cultivation was. Lāhorī, the official historian of Shāh Jahān (1628–58), tells us, as we might expect, that 'Little Tibet' (Baltistan), under the Karakoram range, had only a small amount of cultivation.⁷⁷

Agriculture in the Kashmir valley was supported by a network of canals drawn from the River Jhelum and its tributaries, the entire valley being served by canals brought from the hills by earthen embankments to irrigate the rice fields. A number of these canals are traditionally attributed to the celebrated Sultan Zainu'l ʿAbidīn (1420–70). The Mughal emperors and some of their nobles built canals to provide water for the peasants and for their own gardens. Jahāngīr (1605–27) built the Jui Shāhi canal from the Lar (Sind) river to the Nur Bagh just outside Srinagar. The Shāh Nahr, built by Shāh Jahān, had a masonry

⁷⁷ Bernier, 1916, p. 397; Habib, 1999, pp. 4, 17 and note; Lāhorī, 1866–72, Vol. 1 (ii), p. 287.

channel; it not only supplied water to the Shalimar garden but also had a navigable channel down to Lake Dal. It was fed by water from the Arrah river coming through Faiz Nahr, an old canal that was mainly used for irrigation purposes. Asaf Khān cut a channel from the Faiz Nahr to flow down to his garden, the Bāgh-i Nishāt. Most of these canals were still functional in the early nineteenth century.⁷⁸

While Kashmir's subsistence crop was rice, its major commercial crop was saffron: the exported saffron paid for salt that had to be imported into Kashmir.⁷⁹ According to Abū'l Fazl, c. 1595, 10–12,000 *bighas* (around 2,500 ha) in the valley were sown with saffron, the main localities being Panpur and Indrakol. The total saffron production of the valley was estimated by Jahāngīr at about 1,200 kg. Saffron was also cultivated outside the valley in Kishtwar; here it was finer in quality and fetched higher prices. Akbar is reported to have introduced some improvements in the production of the seed bulbs but the methods of cultivation were still held to be inept in the late nineteenth century.

The quality of rice, the staple crop of the Kashmir valley, was rather poor. Jahāngīr found good-quality rice grown outside the valley in Rajauri. He also tells us that paddy covered three-fourths of the cultivated area in the Kashmir valley, while all other food-grains were grown on the remaining one-fourth. Moorcroft and Trebeck in 1819–25 estimate the total yield of rice in Kashmir as not exceeding 2 million mass-loads or 16,057.44 tons. Interestingly, it was women, who, breaking the earth with wooden mattocks, prepared the ground for rice cultivation.⁸⁰

In the Kashmir valley the wheat grown was very poor and neither barley nor gram was cultivated. Kishtwar, on the other hand, produced much wheat and barley; also lentils, millet and pulses. Barley was the principal crop of Great Tibet (Ladakh), where wheat was also grown though in small quantities. In Little Tibet (Baltistan) again wheat and barley were the major crops. In *sarkār* Pakli (now Hazara) gram was the main crop along with barley.⁸¹

Early in the nineteenth century maize and tobacco had also begun to be cultivated. Moorcroft and Trebeck also list *singhara* (water-nut), calling it the principal article of

⁷⁸ Bernier, 1916, p. 39; Khoyhami, 1954, Vol. 1, pp. 29, 57, 147, 289; Jahāngīr, 1863–84, p. 347; Lāhorī, 1866–72, Vol. 1 (ii), pp. 24–5; Habib, 1986, p. 103; Moorcroft and Trebeck, 1837, pp. 115–18.

⁷⁹ Abū'l Fazl, 1867, Vol. 1, pp. 98, 570; Jahāngīr, 1863–84, pp. 45, 315 (for Kashmir), 295 (for Kishtwar); Pelsaert, 1925, pp. 35–6; Lawrence, 1895, pp. 342–3.

⁸⁰ Abū'l Fazl, 1867, p. 563; Jahāngīr, 1863–84, pp. 317, 300; Moorcroft and Trebeck, 1837, pp. 135–6 (equivalents in modern weights corrected).

⁸¹ Abū'l Fazl, 1867, pp. 563, 585; Jahāngīr, 1863–84, pp. 300, 296; Desideri, 1932, pp. 75, 78; Lāhorī, 1866–72, Vol. 1 (ii), p. 287.

food of the common people, grown in numerous lakes: the daily yield from Lake Wular amounted to as much as 96–120 ass-loads (77.08– 96.34 tons).⁸²

Kashmir was celebrated for its abundant fruits. Apples, melons, peaches, plums, apricots and mulberries are listed by Abū'l Fazl besides grapes (which he remarks were grown in plenty but were generally of inferior quality). Jahāngīr adds pears, water melons and pomegranates; but the pomegranates and mulberries were of not of good quality. Jahāngīr says that the sweet cherry had been introduced during Akbar's reign, being brought from Kabul and propagated by means of grafting. In Kishtwar he notices oranges, citrons, water melons, grapes, apricots, peaches and sour pears. Some of these fruits were exported: Kashmir grapes reached the market of the imperial camp (probably at Lahore) though the cost of transport was 16 times their price in Kashmir.⁸³

Almonds were also produced in large quantities, but walnuts were so abundant that besides being exported to Agra and other places, these were also used for extracting oil in Kashmir. The oil was exported to Tibet and Moorcroft found a flourishing trade that yielded considerable profits during the early decades of the nineteenth century. Walnuts were produced in Baltistan as well, along with grapes, melons, apricots and peaches. Pakli produced wild apricots, peaches and walnuts.⁸⁴

The abundance of fruits and flowers made honey an important product of Kashmir. It was not only collected from the hives of wild bees, but also from those of bees domesticated by peasants. Within Kashmir it served as a substitute for sugar. A very valuable animal product was musk, which was extracted from musk-deer found in Baltistan and Gilgit and was an item of export.⁸⁵

Kashmir was also known for its silk production. In the valley, mulberry silkworms were obtained from eggs imported from Gilgit and Baltistan; the Gilgit eggs yielded a finer fabric. In Gilgit and Baltistan raw silk was also produced besides the silkworm.⁸⁶

The major craft products of Kashmir were shawls and other woollen stuffs such as felt. Shawls made out of shawl-wool were, perhaps, the most celebrated of the products of Kashmir. The best variety was that woven from Shahtoosh wool brought from Great Tibet. Bernier considered shawls the main source of Kashmir's wealth and reported that shawl weaving and embroidery provided employment for a large number of children. In the early nineteenth century, girls started spinning at the age of 10, while it was estimated

⁸² Moorcroft and Trebeck, 1837, pp. 132, 136; Lawrence, 1895, pp. 336, 345.

⁸³ Abū'l Fazl, 1867, pp. 67, 562; Jahāngīr, 1863–84, pp. 299–300, 296.

⁸⁴ Jahāngīr, 1863–84, p. 299; Pelsaert, 1925, p. 36; Haydar Dughlāt, 1898, p. 388; Moorcroft and Trebeck, 1837, pp. 145–9; Lāhorī, 1866–72, Vol. 1 (ii), p. 30; Abū'l Fazl, 1867, Vol. 1, p. 585.

⁸⁵ Moorcroft and Trebeck, 1837, pp. 159–63; Bernier, 1916, pp. 421–2, 426; Desideri, 1932, p. 78.

⁸⁶ Abū'l Fazl, 1867, pp. 562–3; Jahāngīr, 1863–84, p. 300.

that the industry employed around 100,000 females, although the weavers themselves were all men.⁸⁷

Great Tibet yielded most of the wool for the Kashmir shawl industry, but no shawls were woven there. However, other woollen materials made in Tibet were regarded as better than those of Kashmir.⁸⁸ Curiously enough, there is no mention of carpet manufacture in Kashmir before the last quarter of the nineteenth century.⁸⁹

Kashmir also produced excellent woodwork: even the critically minded Bernier found the varnishing ‘perfect’. Praising the carving and gold inlay work on boxes, ink-stands and other articles as ‘remarkable’, he adds that he ‘never saw anything more elegant or perfect’. These had a large market both within the Mughal empire and outside. Good-quality paper was manufactured in considerable quantity from old cloth, hemp, etc., and was an important item of export. Numerous beautifully coloured papier-mâché articles such as inkstands were produced from pulped paper displaying flowery patterns decorated with applications of gold-dust or tin.⁹⁰

The region also produced some gold; it was mined mainly in Tibet and the Himalayas and also collected from gold-sand from rivers. The annual estimated yield of inferior-quality gold in the 1640s from Baltistan and Gilgit was around 2000 *tolas* (approx. 24 kg). In Pakli too gold was washed from sand.⁹¹

Kashmir also had iron mines yielding good-quality iron, but these were no longer worked in the nineteenth century. Jade (nephrite) was reported from Great Tibet in the second half of the seventeenth century along with crystal that was also found in Baltistan; but in 1819–25 Moorcroft and Trebeck do not mention jade at all. Borax, sulphur and touchstone were also quarried.⁹²

The Indus plains

Under the Mughal empire, this large region was administratively divided into the three provinces of Lahore, Multan and Thatta, while the cis-Sutlej area of Sirhind was a part of

⁸⁷ Abū'l Fazl, 1867, p. 564; Jahāngīr, 1863–84, p. 301; Pelsaert, 1925, p. 36; Bernier, 1916, p. 402; Moorcroft and Trebeck, 1837, pp. 174, 178.

⁸⁸ Jahāngīr, 1863–84, p. 301.

⁸⁹ Lawrence, 1895, p. 377.

⁹⁰ Bernier, 1916, pp. 402–3; Ali Muhammad Khan, 1927, Vol. 1, p. 15; Moorcroft and Trebeck, 1837, pp. 216–17.

⁹¹ Abū'l Fazl, 1867, pp. 32, 570; Bernier, 1916, p. 421; Desideri, 1932, p. 78; Moorcroft and Trebeck, 1837, Vol. 1, p. 314; Lāhorī, 1866–72, Vol. 1 (ii), pp. 287–8.

⁹² Abū'l Fazl, 1867, p. 565; Lawrence, 1895, pp. 62–3; Bernier, 1916, pp. 422, 426, 421; Pelsaert, 1925, pp. 44–5; Desideri, 1932, p. 81.

the province of Delhi. In the British period it was almost entirely covered by the provinces of Punjab and Sind. Taking the British province of Punjab (excluding its hill districts), the total area under the plough, c. 1595, has been estimated as nearly 40 per cent of the gross cultivation in 1909–10. The estimate has been made on the basis of measured area statistics in the *Ā'in-i Akbarī*, c. 1595. South of Punjab, the relevant statistics for the Mughal *sarkārs* (territorial divisions) of Bhakkar, Sehwan and Thatta are either incomplete or not available. However, in Aurangzeb's reign the number of villages in the region was only two-thirds of the number of villages reported for 1881, while in Punjab, the number of villages in Mughal times was much greater than in 1881. Possibly, then, cultivation was even less extensive in Sind than in Punjab.⁹³

The Indus and its tributaries were the major sources of irrigation in the region. In Punjab wells are said to have been the principal means of irrigation. Canals were also constructed. In Shāh Jahān's reign a 135-km-long canal, the Shāh Nahr, was excavated from the Ravi near the foothills to carry water to the Lahore gardens. From the same canal three more canals were excavated, running to Pathankot, Batala and Patti Haibatpur. These were found to be of 'great benefit to cultivation' at the close of the seventeenth century. In the Multan area we hear of a canal-superintendent (*mīr-āb*) appointed there with the duties of digging new channels, clearing old ones and ensuring an equitable distribution of canal water among the cultivators. In the southernmost part of the Sindsagar Doab, fields were irrigated by wells and inundations.⁹⁴

In Sind the usual practice was to cut small irrigation conduits from the river or its flood channels. These were supplemented by perennial canals some of which were constructed before the sixteenth century. In the Indus delta, at the beginning of the sixteenth century, a canal, the Khan-wah, was dug from the main river near Thatta running westwards; it irrigated a number of sub-districts. In 1618–29 a *zamīndār* (local hereditary chief; holder of hereditary superior rights over land) excavated a canal from the Indus that made possible the cultivation of *kharif* (summer or autumn) crops on around 24,282 ha in northern Sind. The principal water-lifting device in the region was the *sāqiya*, also called *charkh* or Persian wheel, and used over both wells and canals.⁹⁵

The entire region comprising the Indus plains was considered by contemporaries to be very fertile. Abū'l Fazl describes Lahore province as 'exceptionally fertile', an opinion shared by Thevenot (1660s), who attributes the high agricultural productivity to the

⁹³ Moosvi, 1987, pp. 59–64; Habib, 1999, p. 17.

⁹⁴ Thevenot, 1949, pp. 77, 85; Abū'l Fazl, 1867, p. 538; Sujan Rai, 1918, pp. 77, 79; Lāhorī, 1866–72, Vol. 2, pp. 168–9; Habib, 1999, p. 36; Malikzada, 1882, pp. 151–2; Aurangzeb, 1930, p. 29.

⁹⁵ Bernier, 1916, p. 454; Habib, 1999, p. 38; Yūsuf Mirak, 1962, pp. 17–18; Ma'sum, 1938, p. 110.

presence of so many rivers. Pelsaert's statement in 1627 that the province of Multan was 'exceedingly productive' is supported by Manrique, who found the entire stretch between Lahore and Multan, a 10-days' journey, to be an area of unbroken cultivation. He adds that Sind was also very fertile.⁹⁶ The land-revenue schedules given for Lahore and Multan in the *Ā'in-i Akbarī* and for Sind in the *Mazhar-i Shāhjahānī* (1634) suggest that a large number of crops (in *rabi*, or winter, 19 in Lahore and Multan, and 17 in Sind; and in *kharif*, or summer, 27 in Lahore, 25 in Multan and 22 in Sind) comprising food-grains, pulses, potherbs, oil-seed, cotton, etc. were raised.⁹⁷

Wheat, rice and cotton appear as the principal crops grown all over the region; but for *sarkār* Bhakkar, in northern Sind, barley and *jowar* (great millet), besides wheat, are specified as the main crops. High-quality rice was also produced, declared by Sujan Rai to be superior to that of Bengal and of such a quality as to be procured for the imperial kitchen.⁹⁸ Production of cotton in large quantities is reported particularly from Multan and Sind to meet the demands of a large textile industry. Another widely grown cash crop was sugar cane – Bābur notes its cultivation, particularly in Bhera; Linschoten (1580s) in Thatta; Pelsaert in Multan; and Thevenot and Sujan Rai in Punjab. Thevenot finds it not only 'plentiful' but its quality the 'best in India'. Opium was also cultivated in Multan and Sind. Tobacco cultivation in Sehwan (Sind) was introduced during Shāh Jahān's reign.⁹⁹

Sehwan was also a major centre of indigo production. However, the estimates of production by the English in the 1630s and 1640s show a steady decline from around 60 metric tons in 1635 to less than 40 tons in 1639 and only a little above 13 tons in 1644.¹⁰⁰ Rose-water (and rose essence) was a product of the Mughal gardens. From gardens in Pinjaur in Punjab, 40 *mans* (1.3 metric tons) of roses were collected daily, presumably for manufacturing rose-water and rose essence by distillation.¹⁰¹

Melons seem to have been the main fruit of the region, being grown everywhere. Sirhind and Bhakkar had good mangoes. Jahāngīr mentions the pomegranates of Thatta: according to him these were seedless but not very juicy.¹⁰²

⁹⁶ Abū'l Fazl, 1867, p. 538; Thevenot, 1949, pp. 85, 77; Pelsaert, 1925, p. 31; Manrique, 1927, Vol. 2, pp. 221, 238.

⁹⁷ Abū'l Fazl, 1867, pp. 377–85; Yūsuf Mirak, 1962, pp. 183–4.

⁹⁸ Manrique, 1927, Vol. 2, pp. 221, 238; Thevenot, 1949, pp. 85, 77, 68; Namakin, 1594, MS, fol. 321b; Sujan Rai, 1918, p. 79; Abū'l Fazl, 1867, pp. 53, 556.

⁹⁹ Manrique, 1927, Vol. 2, pp. 221, 238–9; Thevenot, 1949, pp. 77, 85; Bābur, 1922, Vol. 1, p. 388; Linschoten, 1885, Vol. 1, pp. 55–6; Pelsaert, 1925, p. 31; Sujan Rai, 1918, p. 79; *EFI*, 1634–6, p. 129; Yūsuf Mirak, 1962, p. 184.

¹⁰⁰ *EFI*, 1634–6, p. 29; 1637–41, pp. 136–7; 1642–5, p. 203.

¹⁰¹ Sujan Rai, 1918, p. 35.

¹⁰² Abū'l Fazl, 1867, pp. 67, 538, 556; Jahāngīr, 1863–84, p. 193.

A particular variety of silk is also reported to have been produced in Thatta ‘from which excellent taffetas’ were made.¹⁰³ The industry does not seem to have survived into the nineteenth century.

Horses reckoned equal to Persian horses were bred in Punjab, notably in the trans-Indus tract and Patti Haibatpur. Around Sehwan too good horses were bred. Multan and Sind were reputed for their camels (dromedaries). Buffalo were in abundance throughout the region: Punjab had an excellent breed, while in Multan and Sind these were the source of butter and hides.¹⁰⁴

Textiles were undoubtedly the major industry. In Multan and Sind calicoes, ordinary, fine and coarse, were woven. Coarse as well as finer chintz, striped cloth and silk-cotton cloth were also made. The city of Thatta had over 2,000 working looms in the seventeenth century. In Nasarpur (Sind), the English reported 3,000 families of weavers, and at Sehwan over 1,000.¹⁰⁵ Akbar’s efforts led to Lahore becoming a major centre for the production of woollen shawls and woollen and cotton carpets. Abū’l Fazl says there were more than 1,000 workshops at Lahore weaving shawls, woollen as well as silk-and- wool mixed. Satin, felts, coarse woollen stuff, fine calico and striped silk were also produced there.¹⁰⁶

The abundance of cattle contributed to the emergence of a large, widespread leather industry. At Thatta leather goods embroidered with silk threads in a variety of colours were made in large quantities and were exported particularly to Europe. Swords manufactured here were also held to be among the best produced in India. So, too, bows and arrows, saddles and boot-shoes. An important product of Thatta was carved wooden furniture, decorated with ivory and ebony inlay. Finally, there was much lacquerware produced.¹⁰⁷

In the Himalayas bordering the Indus basin we have reports of silver, lead, copper and zinc mines; the copper was mined at Sukhet Mandi. The silver and lead mines were closed by the earlier part of the nineteenth century. Gypsum was quarried near Bhera in Punjab.¹⁰⁸ But the most noted mineral was rock-salt. Sujan Rai says that the two mines at Khura and Kheora in the Salt Range alone yielded several hundred thousand *mans* of salt every year. Burnes remarked in 1832 that the Salt Range had inexhaustible salt deposits and the mines could yield any desired quantity. He estimated the annual production at 800,000

¹⁰³ Manrique, 1927, Vol. 2, p. 239.

¹⁰⁴ Abū’l Fazl, 1867, pp. 140, 150, 538; *EFI*, 1637–41, p. 136; 1634–6, p. 129; Linschoten, 1885, Vol. 1, pp. 55–6; Hamilton, 1739, Vol. 1, p. 126; Sujan Rai, 1918, pp. 66, 75; Yūsuf Mirak, 1962, pp. 32, 88, 239; Pelsaert, 1925, p. 31; Thevenot, 1949, p. 77; Manucci, 1907, Vol. 2, p. 426.

¹⁰⁵ *EFI*, 1634–6, p. 129; 1646–50, pp. 117, 119; 1637–41, pp. 136, 128–9; Manucci, 1907, Vol. 2, p. 427; Pelsaert, 1925, p. 31; Abū’l Fazl, 1867, p. 106.

¹⁰⁶ Abū’l Fazl, 1867, pp. 104, 106, 110; *EFI*, 1618–21, p. 51; Manucci, 1907, Vol. 2, p. 424.

¹⁰⁷ Manrique, 1927, Vol. 2, pp. 238–9; Manucci, 1907, Vol. 2, p. 427; Hamilton, 1739, p. 308.

¹⁰⁸ Abū’l Fazl, 1867, pp. 168, 538, 540; Sujan Rai, 1918, p. 79; Hutchison and Vogel, 1933, Vol. 2, p. 414.

maunds of 100 lbs (3,571 metric tons).¹⁰⁹ Gold was collected from river-sand, and Burnes in 1832 found fishermen washing gold on the banks of the Indus. Lime made from pebbles collected from the Tavi river at Jammu was reputed for its whiteness, cementing quality and durability.¹¹⁰ Salt, iron, copper and antimony mines were reported in the hills bordering Sind in the west, though their exact location was not known.¹¹¹

The Afghan highlands

On the southern fringe of the Afghan highlands are the valleys of the Arghandab and its tributaries and the valley of the Helmand in its middle course. Kandahar (Qandahār) was the main city of the region. Here the cultivation was confined mainly to the lands watered by these rivers. Some cultivation is also reported in the east in the tableland of the southern Sulaiman range, as around Chotiali.¹¹² In the north of this region were pastoral lands in the hill ranges, interspersed with some cultivation in the valleys. An agricultural district surrounded Kabul, at the southern head of a basin carved out by the Kabul river and its tributaries. Bābur has left a detailed account of the region which he brought under his control in 1504: the cultivated lands lay mainly in the flat valley bottoms, while on the slopes the only worthwhile vegetation was *buta*-grass that horses could eat. However, the mountains to the west of Kabul had ‘flat tops’ so expansive that here ‘a horse could gallop’ and on them ‘all the crops were grown’. There were a few more noticeable stretches of agriculture to the east of Kabul: Lamghan, for example, was well cultivated. In Ghazni, the River Ghazni watered ‘four or five villages and three or four more were cultivated from underground water-courses (*kārezs*), but the soil was so poor that it had to be top-dressed every year, making agriculture very laborious’. Bābur tells us that Kabul was ‘not very fertile in grains and a four- or five-fold return was reckoned good there’. But in Ghazni the seed-yield ratio was higher than in Kabul. In the territory around Jalalabad, watered by the Kabul river and with relatively mild winters, good cultivation was also reported. Further east in Peshawar, irrigation from the same river supported extensive grain production.¹¹³

As for individual crops, Kandahar produced wheat that was very white and of such a fine quality that it was sent to distant places as a valuable present. In Kabul wheat and barley were mainly grown in Ningnahr, Daman-i Koh, Ghazni, Jalalabad and Peshawar.¹¹⁴ Rice

¹⁰⁹ Abū’l Fazl, 1867, p. 539; Sujan Rai, 1918, p. 77; Burnes, 1834, Vol. 1, p. 55.

¹¹⁰ Abū’l Fazl, 1867, pp. 32, 538; Sujan Rai, 1918, pp. 36, 74, 79; Burnes, 1834, Vol. 1, p. 80.

¹¹¹ Abū’l Fazl, 1867, p. 556; Yūsuf Mirak, 1962, p. 232.

¹¹² Abū’l Fazl, 1867, p. 586; Habib, 1986, sheet 2A-B, p. 2; Aurangzeb, 1930, pp. 31–2.

¹¹³ Bābur, 1922, Vol. 1, pp. 207–8, 218 (Ghazni), 221–3 (Jalalabad); Sujan Rai, 1918, p. 86.

¹¹⁴ Abū’l Fazl, 1867, p. 586; Bābur, 1922, Vol. 1, pp. 208, 218, 222; Sujan Rai, 1918, p. 86.

was cultivated mainly in the north of Kandahar province, but the quantity produced was much less than that of wheat and barley, if the relative amounts of these cereals claimed in revenue are any index. Rice was, however, widely cultivated in Kabul province. According to Bābur, Ningnahar, which had ample irrigation, produced good quantities of rice along with corn. Upper Bangash was another major riceproducing tract. There were rice fields at the bottoms of the hills in Alishang irrigated by the Alishang river from which Bābur's soldiers collected huge quantities of rice. The output of the fields of Bajaur appears modest since in 1519, when 4,000 ass-loads of rice were demanded from the cultivators, they were unable to meet the demand and were 'ruined'.¹¹⁵

In Kandahar a few pot-herbs, namely, cucumbers (*badrangs*), turnips, carrots, onions and lettuce, are also listed among *sabzbarīs* (spring crops). In Kabul province madder, the red dye, was grown in Ghazni and Bābur says that the entire crop was exported to India at a large profit. He also takes the credit for introducing sugar cane to the river-irrigated lands of Ningnahar in the lower Kabul valley in 1507–8. Sugar-cane cultivation was reportedly flourishing around Jalalabad c. 1840.¹¹⁶

The Afghan highlands were celebrated for the variety and abundance of fruits produced there: in Kandahar, Abū'l Fazl says, fruits grew in abundance and to perfection. Grapes and melons appear to have been the principal fruits grown in the region. Grapes were so abundant that the tax on vineyards was fixed in assloads of grapes and the rates were at par with those imposed on the other two *safedbarīs* (winter crops), wheat and barley. Dried grapes from Kandahar were exported to Mughal India, where they found a ready market. Musk melons and water melons were counted among the *sabzbarīs* and were supposedly superior to those of Kabul. Pomegranates (especially the seedless variety), apples and quinces were grown in the foothills of the Shah Masud range near Kandahar.¹¹⁷

As for the Kabul district, Bābur says that fruits of both hot and cold climates were produced. There were exclusively fruit-growing villages in the foothills of the Hindu Kush. Grapes were so abundant that in certain places grape-wine was consumed in place of water. Bābur's list of cold-climate fruits includes grapes, pomegranates, apricots, apples, quinces, pears, peaches and plums. In and around the city of Kabul an excellent variety of grape ('water grape') was grown along with rhubarb, quinces, plums and *badrangs* (cucumbers?). The hot-climate fruits mentioned are relatively few, namely, oranges, citrons, *amluks* (date-plums), musk melons and water melons. Abū'l Fazl says that musk melons in plenty were

¹¹⁵ Abū'l Fazl, 1867, pp. 588–9; Bābur, 1922, Vol. 1, pp. 208, 342, 373–4; Sujan Rai, 1918, p. 86 (rice in Bangash).

¹¹⁶ Abū'l Fazl, 1867, pp. 587–8; Bābur, 1922, Vol. 1, p. 208 (sugar cane), p. 218 (madder); Vigne, 1840, pp. 230–1.

¹¹⁷ Abū'l Fazl, 1867, pp. 587–8; Macsum, 1938, p. 133 (Shah Masud range).

brought from Kabul to Lahore, though he repeats Bābur's observation that the Kabul melons were not of very good quality. He adds that cherries and jujube were also produced in such quantities that they were exported to India.¹¹⁸ Pamghan to the north-west of Kabul and Lamghan to the north-east were outstandingly rich in fruits, and fruits, especially peaches and pears, grew in the wild in Swat. Oranges and citrons were also cultivated in Swat and Bajaur. The most suitable area for fruit production was presumably Ningnahr, where Bābur laid out four gardens. He also introduced bananas there in 1508–9, and these did well according to his own claims. Peshawar produced grapes, plums and musk melons of good quality.¹¹⁹

Walnuts, almonds and neosias (*chilghozas*) were the other important crops. Neosia and a small variety of walnuts (*bādāmchas*) grew in great profusion in the wild on the slopes of the mountains in Laghman and Bajaur. Neosia-ears were burnt to obtain light. Walnut wood, though not very suitable for the purpose, was commonly used for heating. Honey was collected throughout the Kabul district, except towards Ghazni where there were no beehives.¹²⁰

Kandahar had large areas of pastureland in both hill and plain. The total number of heads of sheep collected in tax was estimated at 45,775 by Abū'l Fazl in 1595. Horses (considered as good as Persian horses) were bred in Barkan in Kandahar while the revenue from Nichara and Duki was taken in Baluchi horses along with camels. The wool was used to make felts and coarse striped carpets.¹²¹

Within Kandahar province, there were iron mines in the Shah Masud range and sulphur mines in the Sulaiman ranges. Asafoetida was exported to Lahore.¹²² In Kabul there were silver and lapis lazuli mines in the mountains of Ghorband. Iron ore from Ghorband was brought to Chankar to be processed to supply iron for the Kabul market.¹²³ The famous silver mines of the Panjshir valley, lying 2–3 *karohs* (74 km) to the right of Kabul, were no longer profitable when Humāyūn visited them in 1548–9.¹²⁴ Abū'l Fazl reports iron mines

¹¹⁸ Bābur, 1922, Vol. 1, pp. 202–3 (fruits of cold and hot climates), 212, 215 (fruit-growing villages); Abū'l Fazl, 1867, pp. 68–71, 587.

¹¹⁹ Bābur, 1922, Vol. 1, pp. 208 (Ningnahr), 210–11 (Lamghan), 216 (Pamghan); Vol. 2, pp. 510–11 (Ningnahr); Abū'l Fazl, 1867, p. 585; Sujan Rai, 1918, p. 86.

¹²⁰ Bābur, 1922, Vol. 1, pp. 203, 213, 223.

¹²¹ Abū'l Fazl, 1867, pp. 588–91. The figures given for heads of sheep collected from different localities add up to 44,675. See also Ma'sum, 1938, pp. 129–30 (for good breeds of horses of Barkan) and Yūsuf Mirak, 1962, p. 26. For felt and striped carpets, see Purchas, 1907, Vol. 4, p. 271.

¹²² Abū'l Fazl, 1867, p. 587 (iron); Habib, 1986, sheet 2A-B, and p. 5 (sulphur mines); Pelsaert, 1925, p. 31.

¹²³ Bābur, 1922, Vol. 1, p. 214; Abū'l Fazl, 1867, p. 594; Tahir, MS, p. 248; Wessels, 1924, p. 17.

¹²⁴ Bāyazīd Bayat, 1941, p. 105; Abū'l Fazl, 1873, Vol. 1, p. 295.

in Swat. There were iron and salt mines in Bangash (Khurram valley), and salt was also mined in the Kohat salt region.¹²⁵ These salt deposits are an apparent continuation of those of the Salt Range across the Indus.

Sistan and Khurasan

One can consider the two geographic regions of Sistan and Khurasan together in our survey. The whole area is in a large part watered by rivers and streams flowing westwards from the Afghan highlands, in a large curve from the River Helmand in the south to Murghab in the north. Because of the volume of water carried by the Helmand and the large alluvial basin it forms, Sistan is perhaps the richest agricultural region, compared to which many of the cultivated districts of Khurasan appear as oases depending on water drained from the hills.

Irrigation was secured in the area not only by cuts from streams or canals, but also by the system of subterranean channels called *kārezs* or *qanāts*. There are many descriptions of this excellent means of irrigation in Khurasan around Nishapur and some other areas.¹²⁶ The principal crops were wheat, barley and rice. Nishapur was celebrated in the Safavid era for its verdure and fertility and is described by Fraser (1821–2) as the most cultivated tract he had seen in the whole of Khurasan: here well-cultivated villages covered an area nearly 129×97 km.¹²⁷ On the other hand, Malcolm found the city of Nishapur in ruins and many of its ‘innumerable channels cut from numerous canals’ disused and dry.¹²⁸ Mashhad commanded a valley watered by the Kashaf river; the low price of grain was an indicator of agricultural prosperity. Merv, in the extreme north-east, was very fertile in grain, but here the cultivated tract extended only 19–23 km around the city, thus forming a relatively modest oasis, which produced large quantities of wheat and barley. Further south Farah, on the river of the same name, commanded another grain-producing tract along the river that ultimately flows into the Hamun-i Helmand. Tobacco, considered almost the best in the whole of Iran, was cultivated at Tabas, situated on the fringes of the Lut desert in south-western Khurasan. Vegetables like carrots, turnips, beetroot, cabbages and a few greens were grown in Mashhad.¹²⁹ Khurasan was also famous for its saffron production.¹³⁰

¹²⁵ Abū'l Fazl, 1867, p. 585 (Swat); Sujan Rai, 1918, p. 86 (Bangash); Bābur, 1922, Vol. 1, p. 231 (Kohat).

¹²⁶ Lambton, 1953, p. 210. See also Fraser, 1984, pp. 79, 406, 432 (‘cannaut’); Malcolm, 1815, Vol. 2, p. 220 (canals and channels in Nishapur). See also Bellew, 1874, pp. 298, 317.

¹²⁷ Rice is not listed among the main crops by Lambton, 1953, p. 2, but its cultivation is reported by Fraser, 1984, p. 470. See also Fraser, 1984, p. 432.

¹²⁸ Malcolm, 1815, Vol. 2, p. 220.

¹²⁹ Fraser, 1984, pp. 432 (Nishapur), 470 (Mashhad), 24 (Tabas), 29–30 (Farrah), 32 (Herat), 56 (Merv).

¹³⁰ *Cambridge History of Iran*, 1986, p. 148.

Khurasan was so celebrated for its fruits that Ulugh Beg, Bābur's predecessor at Kabul, called the Pamghan valley, which abounded in fruits, 'his own Khurasan'. Grapes, figs and fine pomegranates were produced in Tursheer to the immediate north of Tabas. All the fruits of Iran in plenty were grown in Mashhad, its apple being particularly prized. Nishapur, Derud to the north of Mashhad, Herat, Sabzevar and Merv, as well as Farah, had orchards producing a variety of fruits. Oranges and dates were produced in the rather hot climate of Tabas. Dates were also produced in Herat. Mulberries were cultivated in Herat, while the mountains and ravines separating the plains of Nishapur and Mashhad were wooded with wild mulberry and walnut.¹³¹ Silkworms were reared on mulberry bushes and the silk obtained was reeled in Herat and in the vicinity of Nishapur.¹³²

The highlands of Khurasan were rich in sheep and Malcolm in 1812–15 found the mountains of Kayn to the south-east of Tabas covered by sheep; on the meadows of Tabas grazed numerous sheep that were the source of goodquality wool. Camels, which in some districts in the plains constituted the chief form of wealth, were reared in large numbers on the arid plains of Tabas and Kayn. Horses of good breeds were bred in the rich pastures of Sabzevar, which paid part of its revenue in horses.¹³³

The region around Mashhad was rich in mineral resources. The turquoise mines in its vicinity and in Nishapur, which yielded the finest stones, were the most famous. The 'Abdu'l Razaq mines yielded the finest turquoise, a large quantity of which found its way to Russia and other countries of Europe through Bukhara. But the best-quality stones were exported to India, through Herat and Kandahar, India being the largest market along with Turkey. The demand for turquoise within Iran was also quite large. The stones quarried at the mines of Kumeri and Khuruch generally contained white specks and thus were not highly prized; they were mainly for internal consumption or were sent to Bukhara and Arabia. Rich copper and lead mines also existed in the close vicinity of Mashhad but by the 1820s they were no longer worked owing to the prevailing disorder. There were salt mines yielding sufficient quantities for local purposes.¹³⁴

Among crafts, carpet weaving seems to have been the major industry in both Khurasan and Sistan. Herat was a famous centre where carpets of both silk and wool were woven; they were famous for the beauty of their patterns and brilliancy of their colours. Olearius,

¹³¹ Bābur, 1922, Vol. 1, p. 216; Fraser, 1984, pp. 432–3 (Nishapur and Dernel), 470 (Mashhad), 24 (Tabas), 29 (Sabzevar and Farrah) 31–2 (Herat), 56 (Merv); Malcolm, 1815, Vol. 2, p. 225; Purchas, 1907, Vol. 3, p. 85 (Herat, dates).

¹³² Fraser, 1984, pp. 433 (vicinity of Nishapur), 30–2 (Herat).

¹³³ Fraser, 1984, p. 589; Malcolm, 1815, Vol. 2, pp. 223–4, 516 (sheep and camels), 231–2 (horses).

¹³⁴ Fraser, 1984, pp. 367 (lead and copper), 470 (salt mines), 468–9 (turquoise); Malcolm, 1815, Vol. 2, p. 515 (turquoise in Nishapur); Bellew, 1874, pp. 367, 375 (turquoise, Nishapur).

in 1636–7, considered Herat carpets to be the finest in the world. Chardin mentions carpets woven in Sistan.¹³⁵ The western district of Kayn, which was rich in sheep and thus in wool, manufactured carpets on such a scale that it paid part of its tribute in carpets. Felt was made at Herat and the velvet of Mashhad was reckoned the best in Iran. Silks and cottons were also woven there and in Herat. Mashhad swords were held in high repute: they were made by the descendants of a group of accomplished smiths brought and settled there by Timur. The profession, though still surviving, had declined considerably by the time Fraser visited the city in 1821–2. Other weapons and articles of armour of high quality were manufactured at Mashhad. Owing to the proximity of the turquoise mines, gem-cutting was an important craft at Mashhad. Utensils such as cups, dishes, plates, tea and coffee pots and water ewers, all made of the dark-grey stone quarried nearby, were exported from Mashhad to other parts of Iran.¹³⁶

Balkh and Badakhshan

The southern part of Balkh has an extremely uneven terrain, lying on the chains of hills that branch off from the Hindu Kush. Towards the north, alluvial plains created by the Amu Darya (Oxus) and its tributaries made agriculture possible along the rivers that flow out of the Hindu Kush, but they soon ran dry. Under conditions of low precipitation, irrigation alone was the source on which cultivation depended. In the 1830s the Balkhab no longer flowed down to Balkh, yet there was ample irrigation from aqueducts drawn from the river upstream. There were said to have been 18 canals, but by the time Burnes visited the place, many of these were in ruins. Wheat was also grown in Balkh, where unlike India its stalks were as high as in England.¹³⁷

East of Balkh, Haibak and the surrounding area seem to have had good fertile land. Though Moorcroft (1819–25) found several towns in ruins, the fields of a number of villages were nevertheless well-cultivated and watered; he also found traces of past cultivation here and around Khulm. But by his time cultivation seemed meagre, and beyond Yang Arekh, where the River Khulm did not provide natural irrigation, the plains were sterile. The principal crops around Haibak were wheat and millet of three kinds.¹³⁸ Pomegranates, figs, grapes, peaches and apricots are mentioned by Muhammad Tahir (c. 1650)

¹³⁵ *Cambridge History of Iran*, 1986, Vol. 6, pp. 710–12; Malcolm, 1815, Vol. 2, p. 224; Chardin, 1811, Vol. 4, p. 154.

¹³⁶ Fraser, 1984, pp. 468–70 (Mashhad), 30–2 (Herat); Malcolm, 1815, p. 225 (Kayn); Bellew, 1874, pp. 366–7 (Mashhad).

¹³⁷ Burnes, 1834, Vol. 1, pp. 240, 246.

¹³⁸ Moorcroft and Trebeck, 1837, Vol. 2, pp. 401, 415–16.

as being grown in Balkh. Burnes also mentions mulberries and praises the fruits of Balkh and Khulm, particularly mentioning apricots that were as large as apples and excessively cheap, 2,000 being sold for 1 Indian rupee. Dried apricots were exported from Haibak to Bukhara and Astrakhan.¹³⁹

Sheep were numerous, though their wool was coarse: they were exported to Yarkand. Burnes also reported countless flocks of sheep especially in the desert areas. Balkh also bred good horses. Near Haibak every village at the foot of the mountains had droves of mares that were of good height and well formed and could be bought for as little as 20–30 rupees, while according to Moorcroft these would have fetched 250–300 rupees in India.¹⁴⁰

At Yang Arekh, a town founded by ^cAbdullāh Khān Uzbek near Khulm, there were filatures reeling white and yellow silk that was mainly exported to Kabul and Peshawar.¹⁴¹

Badakhshan is the name given to the mountainous region in north-eastern Afghanistan of which Kunduz (Qunduz) was the capital. There were many streams and springs, watering cultivated villages surrounded by gardens in the glens and valleys. In uninundated lands in the vicinity of Kunduz wheat, barley and rice were cultivated. The region was also rich in fruits, such as apricots, plums, cherries and mulberries.¹⁴² The cherries of Kishm were celebrated for their quality, and the grapes of the Pech valley for their abundance.¹⁴³ Bābur maintains that he introduced the cultivation of sugar cane to Badakhshan in 1508–9, but the results are not known.¹⁴⁴

Horses, Bactrian camels and sheep were among the most prized products of Badakhshan, and even in the 1820s the horses offered at the Kunduz market were claimed to be unparalleled.¹⁴⁵ Badakhshan was famous for its rubies, but the ruby mines were situated outside its proper limits, in the Shughnan mountains.¹⁴⁶ The mines were still worked in the early decades of the nineteenth century, though the returns were no longer high.¹⁴⁷ Within Badakhshan, but in the high ranges, were lapis lazuli mines. These were still worked in the 1820s and yielded great masses of this semi-precious stone, which was exported

¹³⁹ Tahir, MS, fol. 90; Burnes, 1834, Vol. 1, pp. 231 (fruit), 233, 239; Vol. 2, p. 201; Moorcroft and Trebeck, 1837, Vol. 2, p. 401.

¹⁴⁰ Burnes, 1834, pp. 246 (horses), 247 (sheep); Moorcroft and Trebeck, 1837, Vol. 2, pp. 411, 417.

¹⁴¹ Moorcroft and Trebeck, 1837, Vol. 2, p. 65.

¹⁴² Burnes, 1834, Vol. 2, p. 201.

¹⁴³ Tahir, MS, fol. 97; Bābur, 1922, Vol. 1, p. 212.

¹⁴⁴ Bābur, 1922, Vol. 1, p. 208.

¹⁴⁵ Bāyazīd Bayat, 1941, p. 144; Lāhorī, 1866–72, Vol. 2, p. 515; Moorcroft and Trebeck, 1837, Vol. 2, p. 424.

¹⁴⁶ Le Strange, 1930, p. 436; Mustaufi, 1919, p. 206; Tek Chand, 1916, 11, pp. 374–5 s.v. *la'l* for their correct location.

¹⁴⁷ Fraser, 1984, App. B, pp. 105–6; Burnes, 1834, Vol. 2, p. 24.

partly to Persia but in far greater quantities to Russia.¹⁴⁸ According to Fraser's information, emeralds were also found there though it was not certain whether these were genuine stones or green-coloured crystals.¹⁴⁹ In the mountain districts of Badakhshan in the Kohitun range, there was an extensive deposit of red rock-salt that was exported to other countries.¹⁵⁰

Part Two

TRADE

(*A. Burton*)

The pattern of trade

From the Caspian to Xinjiang, from Siberia to northern India, there was a large trade network. Nomads and sedentary peoples bartered necessities such as food and materials, merchants provided the items required by artisans and manufacturers, royal agents carried luxury goods such as silks, jewels, hunting birds and expensive furs. The most ubiquitous merchants were known as 'Bukharans' in Russia and Siberia, and as 'Bukharans of Turfan' and 'Samarkandis' in China. But 'Urgenchis' or Khivans from Khwarazm, Multanis (Indian merchants from Multan), Armenians and Persians were also very active within Central Asia, and as far afield as Russia. In the earlier period Bukharans acted as agents for the Kazakhs and the Kalmuks (Qalmāqs) in Russia and Siberia, but as Russia expanded southwards and eastwards, these roles were partly reversed.¹⁵¹

Much of the available information is found in European sources. Universal interest in the produce of the East encouraged travellers, official envoys and even missionaries to write about possible routes, peculiarities of local trade and items that could be bought or sold. In Russia and Siberia there was much official correspondence concerning trade

¹⁴⁸ Le Strange, 1930, p. 436; Mustaufi, 1919, p. 206; Tahir, MS, p. 96; Burnes, 1834, Vol. 2, p. 205.

¹⁴⁹ Fraser, 1984, App. B, pp. 105–6.

¹⁵⁰ Burnes, 1834, Vol. 2, p. 206.

¹⁵¹ See below for alleged illicit dealings in the nineteenth century which increased Bukharan and Kazakh profits and reduced Russian customs revenue (Nebol'sin, 1855, pp. 287–8, 293). See Ziyaev, 1983, and Potanin, 1860, for the increasing quantities of 'Dzungar' items imported into Siberia in the eighteenth century at the expense of Bukharan materials.

and customs duties applicable to foreigners. Customs ledgers of goods entering Siberia in the seventeenth century, and British and Russian commercial surveys of the early nineteenth century, are particularly valuable. Central Asian sources are more sparse and scattered. However, Abū'l Fazl's *Ā'im-i Akbarī* is a useful inventory of items purchased for the Mughal emperor Akbar's court c. 1595.¹⁵² Agreements recorded by the *qāzī* (judge) of Samarkand and manuals for administrators yield some precise facts,¹⁵³ and much can be gleaned from court chronicles, as ambassadors were bound to bring gifts which were valued in the host country.¹⁵⁴

Travel was difficult and lengthy. Water, food and stoves had to be carried, together with spades for clearing snow-covered passes or digging wells, when necessary.¹⁵⁵ Avalanches were likely in the Hindu Kush and sandstorms in the deserts. River crossings could be dangerous.¹⁵⁶ Although journeys were timed to coincide with favourable weather conditions, delays were caused when nomadic guides visited relatives *en route* or when officials were obstructive.¹⁵⁷ Other delays were due to considerations of safety. Caravans were often attacked and merchants could not always defend themselves effectively, despite their weapons and armed escorts. Aware that they might be sold into slavery, if they did not lose their lives, they would wait weeks or even months to join forces with the retinue of an ambassador or with the yearly convoy of the Noghay tribesmen taking thousands of horses to Moscow, for they were always provided with military escorts.¹⁵⁸

Travelling with an official envoy had other advantages: in China, for example, it enabled merchants to go as far as Beijing with their expenses paid by the emperor.¹⁵⁹ In Russia

¹⁵² Abū'l-Fazl, 1867–77. For a study based on this work see Moosvi, 1987.

¹⁵³ Some of the documents from the *Majmū'a al-wadā'iq* [A Collection of Trusts] are reproduced and translated by Fitrat and Sergeev, 1937, and Mukminova, 1985. They are also used by Muzaffar Alam, 1994; see Vil'danova, 1969, for other useful documents.

¹⁵⁴ °Abdu'l Hamīd Lāhawrī and Muhammad Wāris, MS, I.O. Islamic 324, fols. 107a, 143a, 178b, 193b, 196b, 253a, 255a; Hājī Mīr Muhammad Salīm, MS, fols. 248a, 278a-b; °Abdu'l Hamīd Lāhawrī, 1867–72, Vol. 1, Part ii, pp. 65, 89, 104; Vol. 2, pp. 193, 227 et seq.; Mahmūd b. Walī, MS, fols. 247b–8b, 253b, 254b–5a, 256b, 265a, 272a et seq.

¹⁵⁵ Meyendorff, 1826, pp. 236–8; see °Abdu'l Hamīd Lāhawrī, 1866–72, Vol. 2, p. 13, for snow 2 *gaz* deep (about 1.90 m according to Hinz, 1970, p. 63) found in the Hindu Kush by the Mughal army in late June 1646, see Burnes, 1973, Vol. 1, pp. 249, 296; *Ermitazh* 283, MS, fols. 38a–b for water shortages.

¹⁵⁶ Mahmūd b. Walī, 1977, p. 89. Burnes, 1973, Vol. 1, pp. 76, 120, 227, also mentions pestilential winds that caused many deaths and quotes the saying, 'If you want to die, go to Kunduz.'

¹⁵⁷ Nebol'sin, 1855, pp. 65, 68, 71–2.

¹⁵⁸ See Avril, 1693, pp. 117, 122; Burnes, 1973, Vol. 1, pp. 296, 248, 255; Nebol'sin, 1855, pp. 46–7, 91–4; Burton, 1997, pp. 149, 267, 315, for some of the dangers encountered. See *MIUTT*, 1932, p. 197; *Akty istoricheskie sobrannye i izdannye Arkheograficheskoyu kommissiyeu*, 1841–2, Vol. 4, pp. 214–7 for traders travelling with ambassadors or the Noghay horse fair.

¹⁵⁹ Fletcher, 1968, pp. 208, 345, 347; Semmedo, 1642, p. 27, writes that merchants paid a fee of 120 ducats to the *caravan-bāshī* from Turfan in order to pass themselves off as ambassadors bearing tribute.

they could avoid import and sales dues, purchase goods not available on the open market (*zapovednye tovary*) and even reach Moscow or St Petersburg at times when the capital was closed to foreigners.¹⁶⁰

Central Asian merchants were enterprising and patient. They might remain in Russia for years in order to obtain their asking price. Bukharans and Armenians would live ‘ten, fifteen years or more’ in the traders’ hostels of Astrakhan or settle there. Multanis often married and raised families there.¹⁶¹ In 1747 the male residents of Astrakhan included 776 Armenians, 469 Bukharans, 178 Gilanis and 76 Hindustanis, many of them from Multan.¹⁶² There were influential Bukharan colonies in Tobol’sk and western Siberia, others lived in Kashghar and Turfan. Similarly Multanis and Shikarpuris (from Shikarpur in Sind) played a useful role in the khanate of Bukhara as money-lenders and craftsmen.¹⁶³

A large variety of goods was carried, from raw materials and bullion to medicinal plants and slaves. Furs were taken to Siberia because, although plentiful there, the finer types were reserved for the tsar, and ordinary people preferred to buy the stronger and cheaper fox pelts and lambskins from the Kalmuk steppes. In Bukhara Russian hides were popular for saddles and boots, and the delicate goatskin from Bukhara was equally popular in Russia. The slave-trade flourished, supplies coming in after battles and raids, or when parents sold their children at times of severe famine. The greatest purveyors were the Khwarazmians, Kazakhs, Kalmuks and Turkmens; and the wellstocked slave market in Bukhara functioned until the 1870s. Large numbers of Persian captives were taken there and to Khiva in the eighteenth century and also after Shāh Murād’s conquest of Merv in the early nineteenth century, for Bukharan Sunnis had no compunction in turning those whom they regarded as heretics into slaves.¹⁶⁴

¹⁶⁰ *MIUTT*, 1932, p. 98. *Russko-indiyskie otnosheniya v XVIII v.*, 1965, p. 181; see further on the problems of Bukharans, Indians and other Central Asians in Russia and Siberia in Burton, 1997, pp. 463, 469–70, 489–90, 493–4 et seq. in Chs. 14 and 15.

¹⁶¹ *Pamyatniki diplomaticheskikh i torgovykh snosheniy Moskovskoy Rusi s Persiyey, 1890–8*, Vol. 22, p. 61; *Russko-indiyskie otnosheniya v XVIII v.*, 1965, pp. 322–3; Yukht, 1957, p. 138; Dale, 1996, pp. 147–8; see Burnes, 1973, p. 286, for Hindus living in Bukhara in 1832.

¹⁶² Yukht, 1957, pp. 137–8; according to Golikova, 1982, p. 163, the number of ‘Indian’ settlers was 100 in the 1670s and 1680s.

¹⁶³ Mukminova, 1985, pp. 53 et seq.; see Schuyler, 1876, Vol. 1, pp. 184–7, for their continuing money-lending activities in Tashkent in 1873.

¹⁶⁴ I am indebted to Professor Irfan Habib for the information about the large numbers of Persian slaves whom Nādir Shāh found in Khiva in the eighteenth century and whom he liberated. For more about slaves in the sixteenth and seventeenth centuries, see Burton, 1997; see also Burton, 1998; for slaves in the Kazakh encampments, see Semenyuk, 1959. For slaves in Bukhara in the 1870s, see Schuyler, 1876, Vol. 2, pp. 101–9.

Materials were a major item of trade. Cottons were the favourites: sturdy Bukharan *zandānīchī* (from Zand/Zandana near Bukhara) woven in various colours, strong and warm *karbās* (finer cotton) used for clothes or even maps, *chīt* (chintz) from Samarkand and India,¹⁶⁵ *chavdar/chaldar* (glazed cotton), Chinese cottons, Indian muslin and fine white cottons used for turbans. Silks, gold brocades, Persian, Bukharan and Chinese velvets were carried, together with raw cotton and silk. Fresh and dried fruit from Bukhara, Kabul and Persia, camels and dromedaries, tireless Turkic horses from Balkh and Bukhara, and elegant *argamaks* (valuable horses, a cross between Arab and Turkmen) and other horses from the Turkmen steppes were all appreciated in Siberia, Lahore and Beijing. Turkmen horses were much in demand, whether costly or not. In the 1830s they were used by the cavalry of Bukhara and Khiva to the exclusion of all others.¹⁶⁶ Russian wooden dishes and cauldrons, thousands of needles and dyes for Bukharan and Russian craftsmen, tea, tobacco and medicinal plants, coins and jewellery, lapis lazuli spinels and turquoise from Badakhshan, pearls from China, coral beads, carpets and felts, Samarkand paper; the assortment was unending.¹⁶⁷

It is impossible to give comprehensive tables of the quantities involved, as the data available are sadly incomplete. Thus customs records omit such essential details as the length of a piece of material, and this was not due to carelessness, but to the fact that the length could vary and might be measured only at the time of sale.¹⁶⁸ However, a few figures might be of interest to give an idea of the scale involved. In the seventeenth century, for example, the maximum yearly number of pieces of *zandānīchī* declared at Tobol'sk customs was 8,080 pieces in 1655–6. In 1841 a total of 403,660 pieces was declared at Orenburg and Troitsk of which 322,014 came from Bukhara and 81,646 from Khiva.¹⁶⁹ Individual contributions for the earlier period are best illustrated by two consignments taken to Kazan in late 1619. One Bukharan brought 1,294 pieces of *zandānīchī*, 223 pieces of other cottons, 300 sashes, 70 m of chintz, 4.5 kg of silk, a few shirts and caftans, and 13 goatskins. Another carried only indigo, but the return expected on the sale of nearly 213 kg of this valuable Indian dye must have more than compensated for the 9 weeks or more that the merchant must have spent *en route*.¹⁷⁰ Livestock deliveries were sizeable. There were

¹⁶⁵ *Karbās* was known as *byaz* in Russia and *chīt* as *vyboyka*. For more information about the goods carried, see Burton, 1997, Ch. 10.

¹⁶⁶ Hagemester, 1839, p. 58.

¹⁶⁷ Elphinstone, 1972, Vol. 2, pp. 386–7.

¹⁶⁸ Nebol'sin, 1855, p. 275.

¹⁶⁹ *MIUTT*, 1932, pp. 342–3, 356–1, and others enter them as *zenden*; Nebol'sin, 1855, pp. 278–9, enters them as *zendel*.

¹⁷⁰ *Pamyatniki diplomaticheskikh i torgovykh snosheniy Moskovskoy Rusi s Persiyey*, 1890–8, Vol. 22, pp. 643, 640; see Burton, 1997, Ch. 11, for the route which might have been followed.

12,000 horses from 'Turan and Iran' in Akbar's stables and under Jahāngīr (1605–27) the numbers were 3,200 Persian and 5,970 Turkic horses. In the late seventeenth century François Bernier wrote of a yearly intake of about 25,000 Central Asian horses in India which Manucci estimated at 100,000,¹⁷¹ and the Kazakhs herded large numbers of sheep, horses, camels, goats and lambs to Russia.¹⁷²

Chinese rhubarb, held to be a universal cure and also valuable as a dye, was a Bukharan monopoly in Persia and Russia from the first part of the seventeenth century.¹⁷³ Thus a single merchant took 671 kg to Tomsk in 1653 and for about 45 years after 1772 two families delivered 16.38 tons per year to the Russian government.¹⁷⁴

The sixteenth and seventeenth centuries

In the earlier period, merchants from Bukhara were the most versatile and well-travelled. In the sixteenth century they and the Noghays were the only ones to trade in Siberia. Until the late seventeenth century Bukharans acted as middlemen for the Kazakhs, the Kalmuks and the peoples of the Kashghar khanate.¹⁷⁵ Khwarazmians were nearly as active as them in Russia, but their activity was often curtailed as the result of their rulers' aggressive behaviour, and unlike the Bukharans they had no direct contact with India or China. Bukharans had traded in China from the days of the Han dynasty (206 B.C.–A.D. 220). There was even a Bukharan trade hostel in Beijing.¹⁷⁶ Indians also appear to have traded on a large scale in late seventeenth-century Russia for they claimed in 1689 that they were paying taxes of 20,000 roubles in transit, import and export dues.¹⁷⁷ However, they rarely settled in Kazan and Nizhniy Novgorod, where there was a well-established Bukharan presence. They

¹⁷¹ Abū'l Fazl, 1867–77; tr., 1873, p. 132; Manucci, 1907, Vol. 2, p. 290; Moosvi, 1987, pp. 376, 226, 378, agrees with Bernier but thinks 100,000 is excessive, for it does not reflect the number of horses needed for the cavalry of the empire.

¹⁷² *SPBFII*, fond 36, op. 1, no. 554, fols. 264b–266b.

¹⁷³ Kurts, 1914–15, p. 153.

¹⁷⁴ Potanin, 1868, p. 53; *Vneshnyaya politika Rossii XIX i nachala XX veka*, 1974, Vol. 9, pp. 628–9; *MIUTT*, 1932, pp. 354–5, 379. In 1653–4 Central Asian merchants declared a total of 13,538 kg of rhubarb, worth about 11,571 roubles, at Tara customs.

¹⁷⁵ The Kashghar khanate, the large country which extended from Kashghar and Yarkand to Hami and Turfan, was also known at the time as 'Little Bukhariya'. Later it would become known as Chinese (East) Turkistan, or Xinjiang. Its capital in our period was Yarkand.

¹⁷⁶ *Russko-kitayskie otnosheniya v XVII v.*, 1969, Vol. 1, pp. 290, 414; Anon., pp. 21–2; some Bukharans were from Turfan.

¹⁷⁷ *Russko-indiyskie otnosheniya v XVII v.*, 1958, pp. 45, 123–6, 151–4, 176–7, 181, 293, 315, 347; Baikova, 1964, pp. 131, 142–3, 152, 157–8, 165; see *Armyano-russkie otnosheniya v XVII veke*, 1953, p. 175, for Indians selling *dorogi* (striped silk akin to taffeta), fine goat leather (*saf'yan*) and chintz (*vyboyka*) in Moscow.

preferred to concentrate on Astrakhan and Moscow, selling Kalmuk horses and Persian and Central Asian goods, and buying hides, furs, honey and walrus tusks for export to Persia. Armenians were active in Astrakhan and Moscow as individuals and also through a company which obtained the exclusive right in 1667 of taking Persian cotton to Russia and exporting it from there to Europe.¹⁷⁸ Together with Turkish Jews, they are also said to have controlled the Ottoman trade with ‘Persia, Arabia and Tartary’ (i.e. Bukhara).¹⁷⁹ Persian merchants travelled to Russia, Bukhara and India, but they do not seem to have gone to China, for in 1619 Shāh ʿAbbās I (1587–1629) invited Bukharan and Samarkandi merchants to his court to find out about the time taken and the route followed by their yearly caravan to Cathay.¹⁸⁰

At that time Khwarazmians tended to deal mainly in goods produced elsewhere. It is not clear when they started making their own *zandānīchī* and *karbās*, but even in 1669 they only produced the plainer varieties, and they purchased patterned, striped or printed materials from Bukhara.¹⁸¹ The chintz, *zandānīchī*, *karbās*, ready-made caftans, raw cotton and indigo that they took to Muscovy came from Bukhara.¹⁸² They depended so heavily on their neighbours that they did their best to prevent them from trading directly with Russia. Merchants plying to and fro were likely to be seriously delayed, taxed or even thrown into prison in Khwarazm, while their goods were confiscated. Nevertheless, Bukharans purchased most of their slaves and much of their raw silk from Khwarazm.¹⁸³

The people from the Kashghar khanate were hardly involved in manufacture or trade. Indeed they rarely left their land before 1640. By 1685, however, they were making *zandānīchī*, *karbās* and chintz which Bukharan middlemen sold for them in Siberia. Bukharans residing in Turfan also acted as trade agents for Kalmuk chiefs. Thus Ochirtu, one of these chiefs, gave them furs, slaves and horses to sell in Beijing in 1675 and 1676.¹⁸⁴

¹⁷⁸ *Armyano-russkie otnosheniya v XVII veke*, 1953, pp. 175 et seq.; *PSZ*, 1830, Vol. 1, pp. 665–8. According to Zhukovskiy, 1915, p. 2, there were Armenians in Nizhniy Novgorod as early as 1374 when they were implicated in a murder, together with Bukharans and other Eastern merchants.

¹⁷⁹ Osborne, 1745, Vol. 1, p. 509.

¹⁸⁰ Silva y Figueroa, 1905, Vol. 2, p. 378.

¹⁸¹ *RGADA*, fond 134, op. 1, no. 1, fol. 28.

¹⁸² *MIUTT*, 1932, pp. 168, 317; *RGADA*, 1623, fond 134, op. 1, no. 1, fols. 113–20; Pamyatniki diplomaticheskikh i torgovykh snochenii Moskovskoy Rusi s Persiyey, 1890–8, Vol. 22, pp. 641, 644. In 1619 individual Khwarazmians took to Kazan 588, 870 and 1,149 lengths of *zandānīchī* (*zenden*) and also between 6 and 15 caftans made of the same material.

¹⁸³ For more information about the Khwarazm–Bukhara trade, see Burton, 1997, pp. 349, 477, 436–8.

¹⁸⁴ Mahmūd b. Walī, 1977, pp. 71–2; Ziyaev, 1983, pp. 61, 66; *Russko-kitayskie otnosheniya v XVII v.*, 1969, Vol. 1, pp. 413, 414, 429.

Bukharans also took Yarkand jade to China as part of the ‘tribute’ that they were expected to bring for the emperor and which helped them to obtain the right to trade.¹⁸⁵

The Noghays, Kalmuks, Kazakhs and Kyrgyz were nomads. They dealt in livestock, furs and slaves, but also produced mare’s milk, felt, saddles and *armyachina* (a coarse type of woollen material). The Kazakhs were especially renowned for their birchwood arrows and decorated reins, and for a supple waterproof material made from sheep-hide which was prized as highly as satin.¹⁸⁶ They either delivered their goods themselves to Bukhara, Khiva, Muscovy, Siberia or China, or else sent them off with Bukharan middlemen, to be exchanged for materials, ready-made clothes, flour, cooking-pots, items of haberdashery and adornment, and also weapons.¹⁸⁷

The eighteenth century

During the eighteenth century many changes took place. The Kazakhs moved westwards and northwards. Driven away from Lake Balkhash and the Syr Darya by the Kalmuks, they soon controlled most of the trade routes between Central Asia and the Russian empire. They began to guide caravans across the steppes and to trade in the fortresses of the Irtysh and Orenburg lines.¹⁸⁸ Meanwhile the rulers of Bukhara lost control of Balkh, Badakhshan, Tashkent and Ferghana, which made Bukharan trade with India and China more difficult and costly. Indigo, for example, which was essential for the dyeing of fabrics, now had to be acquired from Persia instead of India, musk and castoreum had to be purchased from the Kalmuks and from Tashkent, rather than China. The lapis lazuli and precious stones of Badakhshan were impossible to obtain.¹⁸⁹ In Russia and the Urals, new and highly skilled merchants from Tashkent began to compete with Bukharans and were encouraged to do so by the local authorities.¹⁹⁰ In Astrakhan, however, there was increased interest in the idea of trading with Bukhara. Neither instability in the khanate, nor the tragic fate of the Bekovich-Cherkasski expedition to Khiva in 1717, nor even the conquest of Balkh and Khiva by Nādir Shāh (1736–47) in the 1740s deterred merchants. From Astrakhan Greeks, Russians, Armenians and Indians traded with Iran but also went to Bukhara either individually or with official Russian caravans. Others traded by proxy. Wealthy Indians

¹⁸⁵ Semmedo, 1642, pp. 27, 28.

¹⁸⁶ Fazl Allāh b. Ruzbihān, 1976, p. 128; Sultanov, 1970, p. 49; on Kazakh trade in the sixteenth century, see Fazl Allāh b. Ruzbihān, 1362/1943, pp. 200–1; 1976, p. 116.

¹⁸⁷ For more information about the nomads’ trade with Bukhara see Burton, 1997, pp. 427–34.

¹⁸⁸ Bodger, 1980, pp. 46–7.

¹⁸⁹ Hanway, 1754, p. 243.

¹⁹⁰ See Ziyaev, 1983, for the careful questioning of a merchant from Tashkent in 1735 and for the Russian fact-finding missions of 1741 and 1742.

employed Bukharans residing in Astrakhan as agents or else lent them money to finance their own operations.¹⁹¹

The Russian authorities became more interested in Central Asia due to reports that gold had been found in the upper reaches of the Amu Darya and other rivers.¹⁹² Attempts to locate the sources of this gold and to reconnoitre the area were not successful, however. They merely awakened the suspicions and hostility of local rulers. It was therefore decided to develop trade with Central Asia and India. During the 1740s official caravans were sent to Bukhara and Khiva, and special incentives were offered to Central Asian and Indian traders. Import duties on silver, gold and precious stones were waived, access to Moscow was granted on certain conditions, retail sales were even permitted in 1752 in the newly-created city of Orenburg, although this privilege was generally reserved for local merchants.¹⁹³ Bukharans, who had taken cottons, lambskins and dried fruit there in 1733, responded as expected. They brought over large quantities of silver and gold, together with diamonds and other precious stones, and they were made particularly welcome. They were even allowed to sell their gems in St Petersburg after the Orenburg fair was over, and the authorities gave them a good rate of exchange for their gold.¹⁹⁴ They also continued to trade in Astrakhan, where they sold a variety of materials, sheepskins and dried fruit in the 1750s, although by that time a far greater range of materials and other items was being delivered there by Khivans, Persians (including Gilanis) and Indians.¹⁹⁵ Meanwhile the Kalmuks took camel hair, lambskins and special felt boots to Astrakhan and in 1738 Bukharans living near China agreed to supply 32.7 tons of best-quality rhubarb root to the tsar's representative in Kyakhta, every year, in exchange for large amounts of Siberian fur.¹⁹⁶

In the 1780s Bukharan and Khivan deliveries to Astrakhan consisted of white cotton yarn (195,082 roubles' worth in 1783), followed by Bukharan chintz (44,270 roubles),

¹⁹¹ Yukht, 1957, p. 142; 1990, p. 114.

¹⁹² Gulamov, 1992, p. 41.

¹⁹³ Mikhaleva, 1982, pp. 27–30; Matvievskiy, 1969, pp. 105–7; *PSZ*, Vol. 13, p. 655. The privilege of selling retail was specifically granted to Khivans, Bukharans, 'Kashkar' (Kashghar) and to the people 'from the steppes'.

¹⁹⁴ Miller, 1776, p. 68–9; *AVPRI*, fond 109, op. 1, 1762, no. 1, fols. 3a, 17a–20b. A single merchant, for example, declared diamonds worth 9,730 roubles: *PSZ*, 1830, Vol. 13, pp. 99, 497–8; Vol. 15, pp. 230–1. Silver coins brought over by Bukharans and Khivans originated in India, Iran and Bukhara, and different rates of exchange were laid down for each type. In 1749 a single caravan brought in nearly 6,900 kg of silver.

¹⁹⁵ Miller, 1776, p. 68; *RGADA*, fond 397 op. 1, no. 410, fols. 25a–122b. Cook, 1770, Vol. 1, p. 348, who was in Astrakhan at about that time, lists 'jewels, drugs, copper, fruit, sweetmeats, silks, satins, velvets, brocades and cotton' as the 'produce of Persia, Armenia, Buhara and Chiva' which came over via the Caspian.

¹⁹⁶ *Senatskiy arkhiv*, 1888–1913, Vol. 5, pp. 420–1; *PSZ*, 1830, Vol. 11, p. 684; *PSZ vtoroye*, 1825–81, Vol. 1, p. 1339; *Vneshnyaya politika Rossii XIX i nachala XX veka*, 1974, Vol. 4, pp. 323, 628–32. N.B. Kyakhta was situated south of Lake Baikal on the frontier. The Bukharans from the town of 'Selin' (Selenginsk) who signed a similar contract in 1772 were said to have originated in Kashmir.

karbās (18,123 roubles), Bukharan lambskins (6,067 roubles) and lesser quantities of Indian and other materials, ready-made clothes, furs and raisins. Woollen cloth, indigo and other dyes, hides, iron, steel, mirrors and many items of haberdashery were taken back. India still provided Bukharans with medicines, gold and jewels, in addition to materials. Luxurious silks came from Persia, and Kashghar supplied rhubarb, Chinese tea, porcelain and medicinal herbs.¹⁹⁷

Meanwhile the Kazakh contribution to the Orenburg trade was equivocal: the Kazakhs might lead caravans astray in order to rob merchants of their goods,¹⁹⁸ but they were also keen to barter their livestock. They sold about 200,000 sheep a year there (worth the equivalent of 250,000 roubles in 1782–5), quite apart from lambs, horses, camels, goats, and furs from the steppes. They also dealt in Bukharan chintzes, selling between 250 and 330 Bukharan curtains per year, which was a far cry from the sixteenth century when they were mainly interested in buying enough material to provide people with clothes.¹⁹⁹ The scale of the Kazakhs' dealings with Bukhara and Khiva is not clear, however, although they definitely supplied them with Russian slaves such as Philip Efremov, who wrote a valuable account of his experiences in captivity.²⁰⁰

The early nineteenth century

At the turn of the century, when the wars of the French Revolution and the continental blockade closed the sea routes between Asia and Europe, the Bukharans played a particularly useful role for the Russians. They supplied them with Kashmir and Persian woollen shawls, English goods from India and their own cotton and cotton goods. This service was so highly appreciated that special privileges were offered to them in 1808: they could trade without paying dues in Astrakhan and Orenburg, and they would no longer have to declare and submit their goods to examination in Siberia.²⁰¹ Interestingly enough, it was the

¹⁹⁷ *SPBFII*, fond 36, op. 1, no. 554, fols. 260a–264a; *Ermitazh* 283, fols. 43b–44a.

¹⁹⁸ According to Mikhaleva, 1982, pp. 20, 55, caravans were robbed of a total of 1.5 million roubles between 1764 and 1800.

¹⁹⁹ *SPBFII*, fond 36, op. 1, no. 554, fols. 264b–266a. The Kazakhs, known here as 'Kirgiz-kaisak', also appear to have bartered materials originating in Khiva or Tashkent. Apollova, 1960, p. 265, gives a figure of 87.9 and 95.3 per cent for their cattle imports. See Fazl Allāh b. Ruzbihān, 1976, p. 101, for their activities in the sixteenth century. Nebol'sin, 1835, Vol. 2, p. 177, says the *zaneski* were in fact bedspreads.

²⁰⁰ Efremov, 1893, p. 129. Efremov was sold to Bukhara by his Kazakh captors in 1774. For slaves in the eighteenth and nineteenth centuries, see Elphinstone, 1972, Vol. 1, p. 325; Harlan, 1939; Burnes, 1973, Vol. 1, pp. 281, 283 et seq.; Meyendorff, 1826, pp. 284–5.

²⁰¹ Mikhaleva, 1990, p. 133.

Bukharans and Persians, not the Indians, who took Indian goods to Russia. The Indians settled in Astrakhan preferred to deal in Bukharan, Persian and Khivan goods.²⁰²

Meanwhile trade in Kabul was fairly brisk. Elphinstone does not specify who the carriers were or what goods were exchanged with Persia, but he writes that Kashmir shawls, Multani chintzes, turbans, indigo and fine white cloth were taken to 'Toorkistan'. In return, horses, gold and silver coins were brought over, together with Russian articles ranging from woollen cloth and leather to spectacles and tin, and including cochineal, cutlery, cast-iron pots, needles and mirrors. Small quantities of Bukharan cotton and lambskins, fine camel-hair cloth and 'a few two-humped camels from the Kazakh country' also made their way to Kabul,²⁰³ as did horses from Bukhara and Balkh which Kabulis sold in northern India after they had been fattened locally. Finally, Kabul received a variety of goods from Chinese Turkistan (East Turkistan, i.e. Xinjiang) which included textiles (woollens, silks, satins and raw silk), crystal, tea, porcelain, gold-dust, and gold and silver ingots.²⁰⁴

Two years after the Bukharans had been granted special trading privileges, Russian officials began a campaign against them, determined to put an end to their alleged stranglehold over Russia's Asian trade. Some suggested that Tashkentis be encouraged to compete with them, as being nearer, more conveniently situated, more active as traders and better craftsmen. Others welcomed the Kokand ruler's successes against Bukhara and looked forward to trading directly with his subjects, rather than through Bukhara.²⁰⁵

By this time the Kazakh contribution to Russian trade had increased, with sales of 3–4 million roubles in horses and purchases of only 1.5 to 2 million. This imbalance was apparently due to the dangers encountered on the steppes. From 1798 certain tribes had multiplied their attacks on caravans, and more especially those known to be Russian. The situation deteriorated further after would-be traders among the Kazakhs tried to control the raiders. When fighting broke out between them, Russian traders either gave up their expedition altogether or entrusted their goods to Tatar agents, confident that although Tatars might be delayed, they would not be plundered by the Kazakhs.²⁰⁶ Central Asians also managed to cope with the dangers on the steppes, judging by the yearly arrivals of 3,000–4,500 camels from Bukhara, 1,000–2,000 from Tashkent and Kokand, and 500 each

²⁰² *Russko-indiyskie otnosheniya v XVIII v.*, 1965, pp. 405, 408, 402.

²⁰³ Elphinstone, 1972, Vol. 1, pp. 384, 385, 387; Jenkinson, 1903, p. 472, mentioned similar goods in 1559.

²⁰⁴ Elphinstone, 1972, Vol. 1, pp. 385, 286. No details are provided about the Kabul–Persia trade, except for the fact that caravans marched at night, as they did on the way to India.

²⁰⁵ *Vneshnyaya politika Rossii XIX i nachala XX veka*, 1974, Vol. 5, pp. 617, 639.

²⁰⁶ *Ibid.*, Vol. 5, pp. 563, 617–19; Vol. 4, pp. 329, 633. However, in view of British hostility after Tilsit, in late 1808, Russians refused to send European and costly goods to Central Asia for fear of a drop in price that would cause them losses.

from Khiva and Kashghar, as recorded at Orenburg in 1810, total imports being worth 8–10 million.²⁰⁷

The 1820s

In 1820–1 the presence in Bukhara of Kazakh, Turkmen, Persian, Kashgharian, Tashkenti, Kokandi, Kabuli and Indian merchants was noted by the members of a Russian mission. They also mentioned a few Russians, Tatars and Armenians. Kashgharians traded in the Siberian town of Petropavlovsk, as did Tashkentis and Kokandis, whose contribution to trade had become significant enough to be monitored by a newly appointed Kokandi official.²⁰⁸

The Kazakhs whom Meyendorff saw in Bukhara were experienced merchants. In addition to slaves, as in the past, they carefully herded sheep over because they fetched a better price than on the Russian frontier. They had sold 100,000 sheep for about 1,600,000 roubles and then purchased silk gowns, thick cotton cloth, wheat, oats, sorghum and peas, partly for their own use and partly for resale at a profit.²⁰⁹ Turkmen traders supplied Bukhara with slaves, fresh butter, horse blankets, woollen carpets and warm materials of goat and camel hair, but their speciality was the remarkably speedy and handsome *argamak* horse for which local noblemen paid 800–2,500 roubles, apparently as much as for a young and pretty female slave.²¹⁰

The trade between Bukhara and Russia was dominated by Bukharans, although some Russian Tatars and Astrakhan Armenians were also involved. Bukharans purchased a variety of metals, together with local and English materials, and apparently smuggled out large quantities of Dutch and Spanish coins. Among the goods that they took to Russia, Eversman lists Persian shawls, Indian indigo and Chinese *geschirres* (porcelain dishes?). However, an 1819 customs list from Orenburg shows that raw (275.4 tons) and spun cotton (299.7 tons) also figured prominently, as did cotton materials (172,000 pieces) and Bukharan lambskins (64,825). There were also 12,000 turquoises, 114 kg of lapis lazuli, nearly 500 kg of madder, 132 shawls and a number of silk pieces, and quantities of furs, dried fruit, tea and rhubarb.²¹¹

²⁰⁷ *Vneshnyaya politika Rossii XIX i nachala XX veka*, 1974, Vol. 5, p. 618.

²⁰⁸ Meyendorff, 1826, pp. 209, 217, 249, 251; Eversman, 1822, pp. 76–7; Ziyaev, 1983, pp. 115, 118. A caravan of 500 camels from Kokand arrived in Petropavlovsk in 1822.

²⁰⁹ Meyendorff, 1826, pp. 209, 286, 212; Nebol'sin, 1855, p. 168. According to Nebol'sin's sources, between 1823 and 1849 sheep fetched 1–2 gold coins each.

²¹⁰ Meyendorff, 1826, pp. 284, 209, 217, 286; Eversman 1822, p. 91.

²¹¹ Eversman, 1822, p. 76; Meyendorff, 1826, p. 241; *SPBFII*, fond 36, op. 1, no. 554, fols. 260a–264a. Interestingly enough, raw cotton did not figure at all in the customs records for 1782–5 and a far lower

The Bukharan trade with Persia was on a smaller scale. Only 500 camels were involved, as against the 1,300 camels in the trade with Russia. The carriers were Bukharans, and the merchants came from Mashhad and Herat. Persian silks, woollen cloth and coarse shawls used as, or with, turbans were taken to Bukhara, together with a few carpets and turquoises, to be sold against 'Russian goods' (probably iron, copper, glassware and cochineal), cloves and rhubarb, Bukharan silks, cottons and large quantities of raw cotton.²¹²

Kokandis, Bukharans, Tashkentis, Russian Tatars and Armenians all plied between Bukhara and Kashghar. Using about 600 camels a year they carried Chinese porcelain and tea from Kashghar, and all types of articles from Bukhara, especially furs, gold thread and braid, corals, chintz, printed silks and other materials. Nearer home Kokandis and Tashkentis took their plain white cotton materials to Bukhara to have them dyed or printed by skilled Bukharan craftsmen. They also brought raw cotton, raw silk of slightly inferior quality and silk materials, which Meyendorff considered more durable than local varieties, and they took back prints of all kinds.²¹³

Goods from Kashmir, Afghanistan and India were mainly transported to Bukhara by Afghan and Indian merchants from Kabul, Shikarpur, Peshawar and Multan, although a few Bukharans were also involved. The popularity of Kashmir shawls was then at its peak. According to Meyendorff 20,000 were taken to Kabul every year, of which 12,000 went to Persia, Turkey, Arabia and Africa and 3,000 to Bukhara. Two-thirds of the Kashmir shawls which reached Bukhara went on to Russia, many to be sold at the Nizhniy Novgorod fair, but the less valuable shawls of Kabul and Herat brought over by Kabulis were probably used locally,²¹⁴ as turbans. Indigo was also carried by Kabulis. Russian goods – muslin, iron, copper, glass panes, cochineal – were taken back to Kabul, together with paper, gold brocade (which was cheaper in Bukhara than in India) and Bukharan raw cotton, which was needed to supplement the poor local production.²¹⁵ Indian visitors to Bukhara brought Kashmir shawls, silk and gold brocade, fine cottons used for turbans and linings, a small number of pearls and large quantities of indigo, all of which they exchanged against Dutch

quantity of spun cotton had been taken over at the time. As for the number of *vyboyka* pieces declared, this added up to under 74,000 in these 4 years, whereas 151,600 pieces were declared in 1819. The general assortment was also less wide-ranging, lacking, for example, such items as tea, rhubarb and carpets.

²¹² Eversman, 1822, p. 76; Meyendorff, 1826, pp. 250–1.

²¹³ Eversman, 1822, pp. 76–7; Meyendorff, 1826, p. 251, gives the quantity of raw silk taken to Bukhara by Kokandis in 1821 as 500 *puds*, i.e. 8,190 kg, and he valued it at 304 roubles per *pud* (1 *pud*=16.38 kg.), as against the Bukharan variety which fetched 352.

²¹⁴ Meyendorff, 1826, pp. 249–51, 241–2. The customs record of 1819 quoted by Meyendorff does not confirm the figure of 2,000 given by his Kashmiri informant. In fact only 77 shawls are listed on it. Some 'ordinary shawls' were also taken to Orenburg that year.

²¹⁵ Meyendorff, 1826, pp. 250–1, 248.

ducats. Finally, powdered sugar seems to have reached Bukhara from Peshawar, together with yellow belts, wooden combs and carpets.²¹⁶

The English involvement

Meanwhile, the British had begun to take an interest in Central Asia for political and economic reasons.²¹⁷ In 1809–10 they had been accused of selling their goods very cheaply in order to secure a foothold in Bukhara. Two years later they surveyed the route from India to Bukhara and in 1825 Moorcroft and Trebeck were on their way to Bukhara when death overtook them in northern Afghanistan.²¹⁸ In 1830 a detailed report to the British government listed Bukharan requirements as good-quality broadcloth, chintzes and other cotton goods, cast-iron pots, glass bottles and mirrors, tea, indigo, sugar and paper, together with small numbers of scissors, razors and penknives.²¹⁹ All of this, together with iron, steel, copper and tin, could be supplied at competitive prices by Britain and British India, ‘the freight of a load of 1 ton of iron’ from Britain being ‘far less than the cost of [hiring] one camel from Orenburg to Bukhara’. A much better quality of tea, an item ‘of the greatest request among the Uzbeks’, could also be sent from Bombay to compete with the Kashghar variety available locally.

Bukhara’s main exports were said to consist of slaves, furs, sheep, cotton and tobacco intended for Kabul, low-priced gold, silk and horses, small quantities of coarse cloth and glass beads, and also pistachio, jujube and nuts used in dyeing. In the circumstances, and because caravans were seldom attacked on the new route through Khulm (Afghanistan), an annual spring fair on the banks of the Indus seemed a practical proposition.²²⁰

After visiting Bukhara in 1832–3, Alexander Burnes wrote in more detail about its commerce. Many English goods were arriving there via Russia and were becoming very popular. Chintz sold at a profit of up to 50 per cent. English broadcloth was purchased at Nizhniy Novgorod in preference to the Russian variety, for it was longer-lasting and more colourfast. Indian goods were in great demand. They included Dacca (Dhaka) muslins, Benares brocade (500 pieces imported yearly), Punjab white cloth used exclusively for turbans, a little coarse sugar and especially indigo, averaging ‘five hundred camel-loads a

²¹⁶ *Ibid.*, pp. 249–51.

²¹⁷ Yapp, 1980, pp. 137, 141, 162.

²¹⁸ Mikhaleva, 1982, p. 76; Khalfin, 1974, p. 96.

²¹⁹ The report was signed by P. B. Lord and A. Burnes.

²²⁰ Lord, 1830, fols. 500a–507b.

year' (approx. 47,000 kg) and partly exported to Yarkand.²²¹ Bukhara was exporting silk and wool to Kabul and India. Its trade with Persia consisted mainly of opium and shawls from Kirman exchanged for Bukharan lambskins. With their taxes on merchants and goods Badakhshanis indirectly controlled its trade, bringing in coarse porcelain, musk, bullion and especially tea via East Turkistan to the tune of 950 horse-loads per year (approx. 90,600 kg), taking back karakul lambskins and Persian opium.²²²

The success claimed by Burnes for English goods appears to have been short-lived in Bukhara, but contradictory accounts were given subsequently by Russian officials. Hagemeister, who visited Persia in 1837, was told that English chintz was not liked because it did not last and was far too expensive. Khanykov said in 1841 that it reached Bukhara from Mashhad and Kabul and fetched 2.5–3 *tillās* (coins) for a piece about 25 m long, that is, between 25 and 50 per cent more than a piece of Russian chintz which was 33 per cent longer. Lehman, who was in Bukhara with Khanykov, said he found none in the market,²²³ but Nebol'sin insists that it was particularly successful there in 1841 and 1842 because of its incredibly low price. He explains, however, that prices had doubled by 1844 and that of the two qualities available the first was excellent but prohibitively expensive, while the second was unreliable, short in length, full of holes and with faded colours.²²⁴ He says nothing about English muslin but, according to Khanykov, this was not popular because the birds embroidered on it were thought to contravene Islamic law.²²⁵

The period 1837–50

Meanwhile Hagemeister was told in 1837 that the quantities of cattle and horses that the Kazakhs sold to Russia equalled their combined sales to Khiva, Bukhara, Kokand and China. Helped by their experience on the Irtysh line, where they had been supplying Russian garrisons with furs, sheepskins and lambskins, cattle, sheep and horses since about 1765, the Kazakhs bartered cattle for tea with the Chinese.²²⁶ They provided tallow produced from sheep's fat to Bukharans who took it from the Siberian line to Russia for the benefit of English buyers.²²⁷ As in 1820 they continued to take their sheep to Bukhara,

²²¹ Burnes, 1973, Vol. 2, pp. 429–33, 443, 434–6; see further about Burnes' mission in Yapp, 1980, pp. 202–7, 210.

²²² Lord, 1830, fols. 496b–498b; Burnes, 1973, Vol. 2, pp. 436–40 et seq., 175.

²²³ Hagemeister, 1839, p. 149; Khanykov, 1843, pp. 173, 174, 177; Lehman, 1969, p. 75.

²²⁴ Nebol'sin, 1855, pp. 216–17. This exhaustive account was carefully put together on the basis of oral information, administrative reports and customs records dating from 1823 to 1849.

²²⁵ Khanykov, 1843, p. 170.

²²⁶ Hagemeister, 1839, pp. 253, 249; *SPBFII*, fond 36 op. 1, no. 553, fols. 432a–b, 437a–48a, 450a–b.

²²⁷ Hagemeister, 1839, p. 248.

rather than Tashkent or Russia, purchasing cauldrons as well as grain and materials in exchange.²²⁸

According to Nebol'sin, the Kazakhs were also involved in illicit dealings with Bukharan and Khivan merchants who wished to avoid the government tax payable on commodities. The merchants would barter most of their cottons against Kazakh livestock, well before reaching the official barter hall. Then they hired a Kazakh to take the livestock through customs as his own, knowing that as a Russian subject he would have no tax to pay. They themselves declared a moderate quantity of cotton fabrics on which little tax was payable and they sold this in Orenburg, while supervising the sale of their illicitly acquired livestock against the gold which they would later take out of the country. Another subterfuge consisted in disposing of expensive silk materials and robes in the Kazakh encampments, and then refilling the bales with cheap cottons so that there was no discrepancy between the numbers checked at the frontier and those presented at customs.²²⁹

During this period the Turkmens supplied Persian slaves and carpets to Bukhara. In exchange they probably purchased the Bukharan lambskins that they used for their tall hats, together with other items, such as those that they are known to have bought near Buzachi in 1841, namely fabrics, sashes, ready-made clothes and needles, together with tobacco, mercury, flour, trunks, iron and cast-iron pots.²³⁰

As for the Khivans, according to Khanykov they mainly took apples and untreated ox hides to Russia, exchanging them at Orenburg for the iron and cast-iron goods that they sold in Bukhara, while their local competitors were busy trading at the Nizhniy Novgorod fair. A more comprehensive picture, however, can be gleaned from Nebol'sin. Iron goods and cauldrons were certainly taken to Bukhara, but so were Russian hides, raw silk, sesame seeds and oil. Khivans did not visit Troitsk, however, and although their imports to Orenburg were similar to those from Bukhara, their total value in 1840–9 was 80 per cent lower. Quantities were comparable in the case of raw cotton and plain cotton (white *byaz* or *bayāz*), larger in the case of *zandānīchī* and ready-made gowns, but smaller in the case of furs, shawls, dried fruit, prints and cotton yarn.²³¹ In Bukhara Khivan merchants purchased large quantities of local tobacco and lambskins for resale to the Turkmens and Karakalpaks (Qara-Qālpāqs), in addition to items intended for Khwarazm, namely cotton yarn and prints, robes 'of the best quality', green tea from Kashghar and an inferior quality of both martens and indigo. They also traded with Persia, buying chintz, white linen,

²²⁸ Nebol'sin, 1855, p. 168.

²²⁹ Nebol'sin, 1855, pp. 287–8, 74, 293.

²³⁰ Ibid., pp. 170–1, 305–6; Khrulev, 1863, pp. 27–8.

²³¹ Khanykov, 1843, pp. 172–3; Nebol'sin, 1855, pp. 278–333, 169. Khivans imported 1,121.7 tons of raw cotton into Russia, as against 1,305 tons, together with 391,613 *puds* of *byaz*, as against 399,620.

expensive woollen cloth and slaves in Mashhad, in exchange for ready money, Russian hides and cloth, sesame seeds and Khivan silk.²³²

Kokandis traded with Russia, Bukhara and Kashghar. They competed with Bukharans in Russia, but only at Troitsk and in the towns of the Irtysh line.²³³ According to Khanykov, two main Kokandi caravans arrived every year in Bukhara with Chinese goods, but many small groups of Bukharans travelled to Kokand, taking raw cotton and special plants used as dyes to be exchanged against tea, china cups, Chinese and local silk materials, and large quantities of Russian iron, cast-iron and steel goods. Nebol'sin adds raw silk and berries to the goods that Bukharans purchased in Kokand, and lambskins, muslins, 'chintz and other Russian goods' to the items that they sold there. Kokandis, for their part, transported Russian iron, cast-iron, steel, woollen cloth, hides and cotton materials to Kashghar and returned with tea, porcelain dishes, silk and silver ingots.²³⁴

By 1841 the Bukharo-Persian trade had changed, focusing on the sale of Bukharan lambskins. According to Khanykov, Mashhadis 'rushed' to purchase them in the spring, when they were at their cheapest, and Nebol'sin explains that quantities increased considerably after 1844, when Bukharans began to take them to Persia for the benefit of English customers.²³⁵ Khanykov writes of three to four yearly caravans from Mashhad bringing English chintzes, calicoes and muslins, Persian and Turkmen carpets, local silks, shawls and a few turquoises to Bukhara, and returning with raw cotton and locally produced goods, in addition to lambskins.²³⁶ But Nebol'sin's well-documented account is much fuller. He lists indigo, Kashmir shawls and scarves, cochineal, Russian materials, hides, cauldrons and trunks among the items taken to Persia, adding ginger, sweetmeats, cloves, pepper and heavy Persian brocade to the goods which reached Bukhara.²³⁷

By 1850 the scale of Bukhara's trade with Russia was such that it could supply Russian articles to all its neighbours.²³⁸ Thus Russian hides, cloth, cast-iron and steel objects were sold to Kunduz, and, according to Nebol'sin, Russian copper, cauldrons, trunks, needles,

²³² Nebol'sin, 1855, pp. 169–70.

²³³ Nebol'sin, 1855, pp. 278–333. Generally the trading activities of Kokandis and Tashkentis at Troitsk were on a much smaller scale than those of Bukharans. See Ziyaev, 1983, pp. 110–24, for figures of combined Bukharan and Tashkenti imports of fabrics to the various towns of the Irtysh line.

²³⁴ Khanykov, 1843, pp. 175–6; Nebol'sin, 1855, p. 172.

²³⁵ Their import into Persia and resale to Britain would ultimately lead to their being known as 'Persian lamb' in the pre- 'Animal Rights' context. Nebol'sin, 1855, p. 170.

²³⁶ Khanykov, 1843, p. 173. The turquoises were apparently smuggled in and were not of the best quality, as this was reserved for Russia.

²³⁷ Nebol'sin, 1855, p. 170.

²³⁸ *Ibid.*, pp. 331–2. Between 1840 and 1849 Bukharans took 5.2 million roubles' worth of goods and coins back from Orenburg and Troitsk, quite apart from supplies purchased in Siberia and Kokand. During the same period Bukharan sales registered at Orenburg and Troitsk fetched a total of 7.3 million roubles.

knives, razors, gold thread, braid, tinsel, cochineal, woollen cloth, and a light silk used for waistcoats or upholstery were supplied to Afghanistan. Interestingly enough, he felt the need to explain that neither Russian hides, nor chintz, nor sugar were included, owing to the use of local *saigach* (saiga, a sort of antelope) hide for shoes and to the greater availability of English chintz and Peshawar sugar. In addition to Russian goods, Bukharans took raw cotton and silk, goat's down, cotton materials and scissors to Kabul and Herat, bringing back English chintz, Kashmir shawls, Multani silks and thin cottons, Indian muslin, heavy brocade, spices, opium and large quantities of indigo.²³⁹

At Orenburg and Troitsk, the lion's share of the Bukharan goods declared in 1840–9 consisted of raw cotton and yarn (over 2 million roubles) and cotton materials (over 3 million), followed by lambskins (833,824 roubles). There were 116,288 roubles of silk, lesser quantities of raw cotton and yarn than in 1819 but much larger quantities of *byaz* and carpets,²⁴⁰ and there were also items such as *zandānīchī* and cotton robes which had not figured in 1819. The most valuable items taken back were coins and cotton goods (1,426,464 and 1,044,714 roubles respectively), followed by metals and metal goods, and hides. Dyes were also important.²⁴¹

Central Asian trade developed greatly in the period under review. Although from the eighteenth century Tashkentis, Kokandis, Kazakhs, Kabulis and Kashgharians competed with Bukharans and Khwarazmians for the Russian, Siberian and Chinese markets, such was the range of goods carried that the new traders were able to work alongside those of longer standing, and even to act as go-betweens. Changes in emphasis took place, due to such developments as the sudden popularity of Kashmir shawls and Bukharan lambskins. Central Asians also made the most of new possibilities, taking back substantial quantities of metal and metal goods from Russia in the 1840s (16 per cent of Bukharan purchases),

²³⁹ Nebol'sin, 1855, p. 171; Khanykov, 1843, pp. 174–5, gave the impression that the Bukharo-Kabuli trade was totally in the hands of Kabulis in 1841. Additional items mentioned were small quantities of silk materials, lambskins and a sizeable amount of gold originating in Bukhara, and between 3,000 and 3,500 camels were said to be involved.

²⁴⁰ Meyendorff, 1826, p. 241; Nebol'sin, 1855, pp. 331, 267, 269–70, 332, 276–9, 282–3, 306. In 1819 Bukharan imports were 16,813 *puds* of raw cotton and 18,296 of cotton yarn, but annual imports to Troitsk and Orenburg in 1840–9 could be as little as 1,488 and only averaged 12,994. However, imports of *byaz* seem to have grown vastly, from 20,410 pieces 16 m long to between 77,927 and 172,000 pieces of unstated length. Other materials are difficult to compare, but carpets had grown from 5 in 1819 to an average of 165. See Hagemeister, 1839, Tables. Surprisingly, in the 5 years from 1833 cotton yarn imports from Bukhara totalled nearly as much as in the 10 years from 1840, and the value of cotton goods taken back in 1833–7 was higher at nearly 1.5 million roubles. Perhaps Bukharans realized that an energetic new governor of Orenburg, Perovsky, was keen to develop trade, or else Hagemeister included centres such as Sariachik, Astrakhan, Novo-Aleksandrovsk and Petropavlovsk.

²⁴¹ Nebol'sin, 1855, pp. 268–322, 331, 209–10; Hagemeister, 1839, Tables.

together with large amounts of factory-made cotton materials (20 per cent of the Bukharan, and 34 per cent of the Khivan purchases). The process had already begun whereby the raw cotton that they brought over was used by Russian manufacturers to produce large quantities of cheap materials intended for Russian Muslims and for Central Asia. Although not very noticeable as yet, this process would eventually result in the total elimination of Central Asian textiles from the Russian market. In the meantime, however, the merchants would continue to deal, as before, in a variety of goods ranging from dyes and precious stones to spices, tea, fruit and medicinal plants.