

The Origins of the Indian Coinage Tradition

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This paper explores the history of almost two and a half thousand years of coinage in South Asia as an extension of my thoughts on the problems of the chronology of India's first coins, which I first published in 1983, exploring the methodologies used, and 1985, proposing an alternative chronology. Further brief comments were made in 1995-6.¹ My main aim here is to continue my mission to promote clarity of thought in this problematic topic by approaching it from a fresh perspective. It is also my intention to draw attention yet again to the importance of numismatics as a discipline of considerable value to the study of Indian history and to highlight some of the insights which coins can provide in understanding the concept of unified tradition within the Indian subcontinent.

By the *Indian coinage tradition* I mean to refer to what is common to the numismatic heritage of the modern states of India, Pakistan, Bangladesh, Sri Lanka, Nepal and Bhutan. This same heritage has also been shared at various times by Afghanistan, Tibet, Burma, Thailand, Malaysia, Indonesia and the Philippines, and has also reached out and touched the monetary history of Uzbekistan, Tajikistan and Chinese Turkestan, China, the Maldives and Seychelles, Mauritius, the Gulf States, Aden, Somalia, Kenya, Tanzania, Mozambique and South Africa.

The concept of a coinage tradition

The concept of *coinage tradition* is one used by many modern numismatists to aid their understanding of continuity in the development of coinage within particular cultures.² A coinage tradition can represent a common tradition in terms of the monetary role of coinage as well as in terms of the technology used to produce it and the visual vocabulary of coin design.

One can speak for example of European imperialism spreading the western tradition of coin use to the New World and sub-Saharan Africa, i.e. regions which had no knowledge of coin use before Europeans arrived with their own coins and coin-using customs. Or one can speak of the Chinese tradition of only using coins made by casting in moulds, and compare it with the European tradition of using coins made by striking between dies. One can also talk about the Roman tradition of using imperial portraits on their coins as

opposed to the Islamic tradition of using inscriptional designs.

The idea of coinage tradition can therefore be seen as a numismatic tool, i.e. a methodological device for the study of coinage. It helps shape the broad picture of development and distinguishes the different characteristics of coinage in different parts of the world. It is not, however, a product of modern numismatic research, but an innate aspect of coinage, the recognition of which has helped scholars understand the nature of coinage.

The function of a coinage tradition

Tradition has a firm place in the monetary function of coinage. Coins can function as money because they are part of a system. The system enables individuals making and receiving a payment to hold a shared view of their value and acceptability for the purposes of that payment and of the broad range of payments in which they expect to participate in the future. Tradition helps shape that system, guarantees its operation and ensures its continuity. As we know from our own daily experiences of using coins, we are barely conscious of that tradition while using the coins, but what else induces us to participate wholeheartedly in a system based on the giving or receiving of bits of metal as though they represented true value? In many parts of the world the system has also become a legal structure underwritten and regulated by the state.

The tradition is so well established that we absorb it in childhood and only question it when presented with interruptions of its flow, such as the introduction of a new denomination, a new shape or a new design. Everyone in Britain over the age of thirty five will have memories of the rudest recent break in tradition when we had to abandon the pounds, shillings and pence we all knew for the new and unfamiliar decimal pound and pence, accompanied by several new denominations and a new heptagonal shaped coin. In the process of imposing these changes, the British Government, through the Royal Mint, paid close attention to other aspects of the British coinage tradition so that the transition was less painful for the coin users. They retained most aspects of traditional design and made direct relationships between some old and new denominations. They could also rely on the strongest

part of the tradition without any action being required, i.e. the British people had already been using regally-issued coins in monetary transactions for over a thousand years, so minor changes to the denomination system were unlikely to have any serious lasting effects. Decimalisation was effected in Burma in 1952, in India in 1957, in Pakistan in 1961 with similar responses and with an equally rapid acceptance. For similar reasons the new Euro coins were also readily accepted as money in most parts of Europe from January 2002 without any practical difficulties, even though the idea was politically problematic for some.

The minor nature of the changes to coinage involved in British decimalisation and the introduction of the Euro are what ensures continuity in the European coinage tradition. Each change has to be relatively small to maintain the acceptability of coinage as a means of monetary payment, but added together these small changes transform coinage through time, creating the different appearances of for example ancient Roman and modern British coins. The continuity of these changes has built a tradition which makes coins two thousand years apart into a single phenomenon. A brief examination of these Roman and British coins finds them, in spite of their differences, still sharing many features: both pieces of metal struck between dies, both decorated with the portrait of the ruler and both inscribed in Latin. The differences of design, denomination, value, metal, shape, technology and style represent both the practical changes needed to maintain the coins' role as money and the incidental changes caused by the vagaries of politics, art and fashion. The practical changes have often had to be made as part of a pattern which can be seen as integral to the tradition. The



1. Silver square punch-marked coin, c. 180 BC. Front: five punch-marks, sun, six-armed symbol, hare in new moon, arched-hill with crescent and tank with four fish; back: two punch-marks, arched-hill with crescent and quadruple nandyavartana.



2. Copper square cast coin, c. 180 BC. Front: elephant, triangle-headed standard and nandyavartana symbol; back: tree in railing, cross-shaped space, arched-hill and crescent and nandyavartana.

pattern in Britain leads us to expect, for example, that the date on the coinage will be changed from year to year and that the monarch's head will be replaced by that of the next monarch at the transition between their reigns.

The Indian coinage tradition

India's coinage tradition has existed for well over two thousand years. Its origins reach back some centuries earlier than the arrival of the western coinage tradition in Britain. I will return below to the question of how many centuries ago India's coinage tradition began, but first I will look at some of the characteristics that distinguish it.

The most obvious part of the tradition is the continued production and use of coinage in India throughout these two thousand years and more. The most characteristic features are the repeated re-emergence of square-shaped coins throughout that time and the preference for symbolic rather than representational designs. The use of square coins and of symbolic designs can be traced back to the silver punch-marked coinage, India's earliest phase of coinage. The most-commonly encountered punch-marked coins were often made from cut-up sheets of silver, hence their rectangular shape, and were stamped with five small symbols (Fig. 1). Contemporary with the punch-marked silver coins, there were also square copper coins made by casting with similar symbolic designs (Fig. 2). The squareness and the use of symbolic designs are features which are unusual in most other coinage traditions, where most coins are round and designs are representational, heraldic or inscriptional.

The Indian tradition has furthermore shown a distinctive ability to adopt and absorb aspects of foreign coinage traditions. This readiness is undoubtedly a response to the imperative created by numerous invading and trading forces carrying new coinage ideas into India.

Greek influence

The earliest clearly identifiable external influence to have an impact on the Indian coinage tradition was the spread of coins of the Greek tradition into the north-western corner of the sub-continent during the period when the silver punch-marked coinage was beginning to be made and used in India.

Greek coins appear to have first penetrated into this region during the period of its rule by the Iranian Achaemenid kings. Greek coins circulated as monetary bullion into Afghanistan during the century before Alexander the Great put an end to Achaemenid rule in the region during 329-7 BC. Coins of Alexander have also been found in northern Pakistan.³

After the death of Alexander the issue and



3. Silver 4 drachm (Attic standard) of Demetrius I, Greek king of Bactria, c. 200 BC. Front: bust of king wearing elephant scalp; back: Greek god Heracles and Greek inscription, identifying the king as issuer.



7. Copper square coin of Menander I. Front: Bull's head with Greek inscription, identifying the king as issuer; back: tripod with Kharoshthi inscription, translating the Greek inscription.



4. Silver 4 drachm (Indian standard) of Menander I, Greek king of 'India' (i.e. south-eastern Afghanistan, Pakistan and north-western India), c. 150 BC. Front: bust of king holding spear with Greek inscription, identifying him as issuer; back: Greek goddess Athena holding shield and thunderbolt with Kharoshthi inscription, translating the Greek inscription.



8. Silver drachm of Audumbaras, Punjab, c. 50 BC. Front: elephant holding umbrella over trident with Brahmi inscription, identifying king Rudravarma as issuer; back: bull and chakra with Kharoshthi inscription, translating the Brahmi inscription.



5. Copper square die-struck coin of south-eastern Afghanistan and northern Pakistan region, c. 150 BC. Front: elephant and arched-hill with crescent; back: lion, arched-hill with crescent and swastika.



9. Silver drachm of Kunindas, Punjab, c. 50 BC. Front: goddess holding lotus facing buck with swastika, arched-hill with crescent, srivatsa and unidentified symbol, with Brahmi inscription, identifying king Amoghabhuti as issuer; back: hill, tree in railing, triangle-headed standard, nandyavartana symbol, swastika and river symbol, with Kharoshthi inscription, translating the Brahmi inscription. (British Museum electrotype of example in Lahore Museum)



6. Silver square drachm of Apollodotus I, Greek king in south-eastern Afghanistan, c. 170 BC. Front: elephant with Greek inscription, identifying the king as issuer; back: bull with Kharoshthi inscription, translating the Greek inscription.



10. Silver drachm of Apollodotus II, Greek king in north-western India and northern Pakistan, c. 50 BC. Front: bust of king, with Greek inscription identifying the king as issuer; back: Athena holding shield and thunderbolt with Kharoshthi inscription, translating the Greek inscription.



11. Silver drachm of Nahapana, satrap of western India, c. AD 30–70. Front: bust of satrap with Indian inscription written in Greek script, identifying the satrap as issuer; back: arrow and thunderbolt, with Kharoshthi and Brahmi inscription versions of the inscription written in Greek.



12. Silver drachm of Jivadaman, satrap of western India, c. AD 178–198. Front: bust of satrap with date, Saka Era year 120 and blundered Greek inscription; back: arched-hill with crescent and sun, moon and river symbols with Brahmi inscription, identifying the satrap as issuer.



13. Silver drachm of Yajna Satakarni, Satavahana king of southern central India, c. AD 110–135. Front: bust of king with Brahmi inscription, identifying the king as issuer; back: arched-hill with crescent and sun, moon, river and four-armed lunar cycle symbol with Tamil-Brahmi inscription, translating the Brahmi inscription. (British Museum electrotype of Pearse collection specimen)



14. Base-silver drachm of Kumararagupta I, Gupta king of northern India, c. AD 414–455. Front, bust of king with blundered Greek inscription; back: Garuda emblem of Hindu god Vishnu with Brahmi inscription, identifying king as issuer.



15. Silver drachm of Azilises, Scythian king in south-eastern Afghanistan and northern Pakistan, c. 30 BC. Front: king on horseback with Greek inscription, identifying king as issuer; back: Hindu goddess Sri standing on a lotus and being bathed by elephants, also on lotuses, with Kharoshthi inscription, translating the Greek inscription.



16. Copper square coin of Maues, Scythian king in northern Pakistan, c. 70 BC. Front: Hindu god Balarama, holding plough and pestle emblems, with Greek inscription, identifying king as issuer; back: unidentified goddess, holding belt, with Kharoshthi inscription, translating the Greek inscription.



17. Copper coin of Kujula, Kushan ruler in Afghanistan and Pakistan, c. AD 30–80; with bust of ruler, copying Roman imperial portrait, with Graeco-Bactrian inscription in Greek script, identifying king as issuer; back: ruler on throne, copying seated emperor design on coins of Roman emperor Augustus, with Kharoshthi inscription, translating the Graeco-Bactrian inscription.



18. Gold stater/dinara of Kanishka I, Kushan king of Central Asia, Afghanistan, Pakistan and northern India, c. AD 127–150. Front: standing figure of the king in nomad dress, making a sacrifice, with Bactrian inscription in Greek letters, identifying king as issuer; back: the Kushan god Oesho (represented as the Hindu god Siva), with Bactrian inscription identifying the god.



19. Gold stater/dinara of Huvishka, Kushan king, c. AD 150–190. Front: bust of king holding club emblem of Oesho, emerging from mountain top, with Bactrian inscription, identifying king as issuer; back: three Hindu gods, Skanda Kumara, Mahasena and Visakha, standing within a temple, with Bactrian inscription identifying the gods. This design is based on the reverse of a gold coin of the Roman emperor Hadrian, AD 117–138.



20. Gold stater/dinara of Huvishka, Kushan king, c. AD 150–190. Front: bust of king holding club emblem of Oesho, emerging from mountain top, with Bactrian inscription, identifying king as issuer; back: the Kushan god Shahrevar, with a Bactrian inscription identifying him. The reverse design is based on military gods on Roman imperial coins.

circulation of coins of the Greek tradition in the Greek kingdoms in the territories of modern Afghanistan and Pakistan during the third to first centuries BC gradually increased the influence of Greek coinage designs, technologies and denomination systems on the Indian coinage tradition (Figs. 3 and 4).⁴

As a result, for example, Indian copper issues in the north-western part of the sub-continent during the second century BC were struck between dies in the Greek manner and had realistic representations of animals included in their designs (Fig. 5). The traffic was not one way and some of the Greek issues from the region show that they were in their turn influenced by the Indian coinage tradition in their shape and choice of design. Second century BC Greek silver issues from the Kabul region were square in shape like the Indian silver punch-marked coins and had representations of Indian animals as their main designs, accompanied by both Greek and Indian (Kharoshthi) inscriptions (Fig. 6). Copper coins issued by the Greek kings in the North-West continued to have square shape, but sometimes maintained Greek designs (Fig. 7).⁵

The technology of die striking gradually became the normal method of coin production in the Indian tradition, replacing the punch-marking techniques and the use of casting in moulds by the first century AD. The use of realistic representation also became more widespread, but was often restricted to encouraging a more detailed representation of the animals, deities and plants which had previously been depicted in a symbolic form. The use of inscriptions also began to be adopted. In the regions closest to Greek influence the inscriptions were often written in two scripts (Kharoshthi and Brahmi) to parallel the Greek use of bilingual inscriptions (Figs. 8 and 9).

In western India the circulation of Greek coins into Indian territory prompted a form of close copying which persisted for several centuries, eventually spreading into central India. The coins being copied were silver issues of the Greek kings of the Punjab, particularly Menander (Fig. 10) and Apollodotus II. A Greek text of the mid-first century AD, the *Periplus of the Erythraean Sea*, refers to the circulation of these coins in western India.⁶

The local rulers in Western India issued imitations of the Greek coins, retaining their own adaptation of the typical Greek portrait head, surrounded by a Greek inscription, on the front, and replacing the Greek goddess Athena surrounded by Kharoshthi script on the back with a group of Indian symbols surrounded by Brahmi, initially together with Kharoshthi (Fig. 11).⁷ These local adaptations of the Greek original continued to be issued for about three hundred years (Figs. 12 and 13) until their issue was taken over by the Guptas and spread further east into central India (Fig. 14).⁸ After the Guptas their issue continued in new hands, the Valabhi kingdom in western India and the Maukhari kingdom in central India, and vestiges of these adaptations of the original Greek design can be traced down into the ninth century.⁹

The longevity of such imported designs can be recognised as another characteristic of the Indian coinage tradition, which will be encountered again later.

Second-hand Greek influence

After the demise of the Greek kingdoms of the north-western corner of the sub-continent, further waves of the Greek coinage tradition continued to penetrate India, but in transformed versions. The successors of the Greeks were Central Asian nomadic peoples who had settled in former Greek territory, Scythians, Parthians and Kushans. They all adopted coinage from the Greek tradition, but intermingled Greek designs with Iranian adaptations of Greek designs.

The Scythians and Parthians adapted Greek designs by introducing new forms of portraiture, replacing Greek royal portraits, with nomad-style equestrian, full figure or head and shoulder bust type portraits drawn from non-Greek artistic traditions (Figs. 15 and 16).¹⁰

The Kushans further adapted these, using full figure and head and shoulder portrait types and replacing the horse with the elephant as the royal mount. Roman coins also began to appear in India as trade goods during the Kushan period and elements of the Roman version of the Greek coinage tradition also began to be integrated into the Kushans' Indian issues, adopting some aspects of Roman coin design, such as labelled divine images. As a response to Roman influence the Kushans also introduced gold coinage into India. The main Kushan denomination, given the Roman name *dinara* (from the Latin name for gold coins *denarius aureus*), can be traced in India throughout the Gupta period and on in eastern India until the Palas in the ninth century AD. It also survived in Afghanistan until the sixth century AD. On a few occasions direct copies of Roman prototypes were produced by the Kushans (Figs. 17, 18, 19 and 20).¹¹



21. Gold dinara of Kanishka II, Kushan king, c. AD 227–247. Front: standing figure of the king in nomad dress, making a sacrifice at an altar surmounted by the trident emblem of Oesho (Siva), with Bactrian inscription in Greek letters, identifying king as issuer and Brahmi mint marks; back: the Kushan goddess Ardochsho holding a cornucopia and diadem, with Bactrian inscription identifying the goddess.



25. Copper tanka of Toramana, king of Kashmir, 9th century. Front: standing figure of the king, making a sacrifice, with inscription identifying king as issuer; back: Sri seated on a lion, with inscription naming the king.



22. Gold dinara of Samudragupta, Gupta king of northern India, c. AD 330–380. Front: standing figure of the king, making a sacrifice at an altar surmounted by the Garuda emblem of Vishnu, with Brahmi inscription identifying king as issuer; back: Sri (represented as the Kushan goddess Ardochsho) enthroned, with Brahmi inscription naming the king.



26. Copper tanka of Rajadeva, king of Kashmir, c. AD 1214–1236. Front: standing figure of the king; back: the Hindu goddess Sri seated, with inscription naming the king.



23. Gold dinara of Vainyagupta, Gupta king, c. AD 500–510. Front: standing figure of the king holding bow and arrow facing the Garuda emblem of Vishnu, with Brahmi inscription identifying king as issuer; back: Sri seated on a lotus, with Brahmi inscription naming the king.



27. Gold dinara of Chandragupta II, Gupta king of northern India, c. AD 380–414. Front: king on horseback, with Brahmi inscription identifying him as issuer; back: Hindu goddess Sri seated on low stool, with Brahmi inscription naming the king.



24. Gold dinara of the kingdom of Samata, c. AD 600. Front: standing figure of the king holding bow and arrow, with standard bearing the conch emblem of Vishnu, with Brahmi inscription; back: Sri standing holding lotus bud.



28. Silver half drachm of Mirososno, Hephthalite Hun king of Kabul, c. AD 450. Front: king on horseback, with Hephthalite tamga and Bactrian inscription identifying the king as issuer; back: chakra resting on back of lion.



29. Silver drachm of Shapur II, Sasanian king of Iran, c. AD 309–379. This variety of Shapur II is frequently found in Afghanistan and Pakistan. Front: bust of king with Pahlavi inscription identifying king as issuer; back: fire-altar, with divine bust in flames, flanked by two attendants.



30. Gold dinara of Hormizd I, Sasanian king of Afghanistan and northern Pakistan, c. AD 270–290. Front: standing figure of the king in armour, making a sacrifice at an altar surmounted by the trident emblem of Oesho (Siva), with Bactrian inscription in Greek letters, identifying king as issuer and Brahmi mint marks; back: Oesho, with Bactrian inscription identifying him as 'exalted god'.



31. Silver drachm of Hephthalite Huns in Afghanistan, c. AD 400. Front: bust of king, with Hephthalite tamga and Bactrian inscription naming the Huns ('Alchono') as issuers; back: fire-altar, with divine bust in flames, flanked by two attendants.



32. Silver drachm of Piruz, Sasanian king of Iran, c. AD 457–484. Piruz drachms are frequently found in Afghanistan and Pakistan. Front: bust of king with Pahlavi inscription identifying king as issuer; back: fire-altar, flanked by two attendants, with Pahlavi inscription naming king and mint.



33. Silver drachm of Hephthalite Huns in Punjab, c. 6th century. Copying the designs of the silver drachm of Piruz (no. 32).



34. Base silver dramma of Gurjara-Pratihara kings of northern India, c. AD 800. Front: bust of king, copied from Piruz drachm, and inscription 'sri vighraha'; back: fire-altar flanked by attendants, copied from Piruz drachm.



35. Base silver 'Gadhiya paisa' dramma of western India, 12–13th century. Front: bust of king; back: fire-altar, both front and back copied from earlier copies of Piruz drachm.



36. Silver dramma of Turkish Shahi kings of Kabul, c. AD 800. Front: Horseman holding spear, with Bactrian inscription: Sri Spalabad (Lord Commander); back: recumbent bull with trident symbol of Siva on rump, with inscription Sri Spalapatideva.



37. Base silver dramma (jital) of Mu'izzuddin Muhammad bin Sam, Ghurid Sultan of Ghazni in Afghanistan, issued as conqueror of northern India, AD 1173–1206. Front: horseman; back: recumbent bull, with inscription Sri Mahamada Sam, identifying the issuer. Both sides are copied from imitations of Shahi silver drammās.

Versions of the Kushan full figure portrait (Figs. 18 and 20), as adapted by the Guptas (Figs. 21 and 22),¹² can be traced in eastern Bengal until the ninth century AD (Fig. 23),¹³ and as adapted by the Huns, in Kashmir until the thirteenth century (Figs. 24 and 25).¹⁴ Under the Guptas and Huns royal horseman portraits continued to be used in northern India for several centuries (Figs. 26 and 27).¹⁵

The Kushan empire collapsed under pressure from the Sasanian rulers of Iran in the third to fourth centuries and invasion from Central Asia by the Huns in the fourth century. The Sasanians had developed their own coinage tradition out of the Greek-style coinages of the Parthian kings whom they succeeded as rulers of Iran. They retained the Greek tradition of royal portraiture, but introduced Iranian inscriptions. They adapted the Greek use of religious coin designs to their own Zoroastrian faith, replacing images of gods with a fire altar, sometimes flanked by representations of Zoroastrian divine beings (Fig. 28). They introduced these designs into former Kushan territory, sometimes mingling them with elements of Kushan coin design (Figs. 29 and 30).¹⁶ Sasanian portrait and fire altar designs were adopted by the Huns, who had not previously used coins (Fig. 31).¹⁷

In parts of western India the Huns established the use of Sasanian designs, derived from the coins of the Sasanian king Piruz (457–483), which they brought with them from Afghanistan (Figs. 32 and 33).¹⁸ These designs remained current, with progressively modified forms, in the region until the thirteenth century, by which time their origins were barely recognisable (Figs. 34 and 35). Elsewhere in India the Huns copied Kushan or Gupta designs.

During the seventh century AD Central Asian Turks replaced Hun rulers in the north-western part of the sub-continent. Like their predecessors they adopted Sasanian coin designs and made further adaptations of Hun versions of Sasanian, Kushan and Gupta designs. Turkish silver issues from the Kabul region were so popular that they spread into northern India. Their usual designs featured a horseman, based on Hun adaptations of a Gupta design (Figs. 26 and 27), on the front, and a bull derived through Hun issues from Kushan designs (Fig. 36).¹⁹

Islamic and European influences

The impact of other imported coinage traditions, which can also be traced back to the ancient Greek tradition, have continued to play a role in the development of the Indian coinage tradition down into the present century. The arrival of Islam in the sub-continent during the eighth century introduced the Islamic coinage tradition into the Sind region, and soon after into Afghanistan and

northern Pakistan. The Islamic tradition was a product of the Islamicisation of the Roman and Sasanian coinage traditions, both of which had their own origins in the Greek tradition. Later it was the turn of the European coinage tradition, a distant descendant of the Roman and Islamic coinage traditions to play its part in shaping the Indian coinage tradition as it developed its present form over the last two centuries.

When the Afghan Ghurid ruler Ghiyath-al-Din Muhammad bin Sam (1163–1206) began the Islamic conquest of India in 1192 his initial issues copied local Indian copper versions of the Turkish horseman/bull types (Fig. 37) and gold coins with designs traceable back to Gupta adaptations of Kushan issues (Fig. 38). He soon, however introduced his own purely Islamic designs. In accordance with Islamic coinage tradition these were inscriptional designs, not depicting living beings (Fig. 39).²⁰

The coins of his successors developed their own distinctive Indian version of the Islamic tradition. Some issues used the traditional Indian square shape, while others integrated the square form as a frame for the inscriptional design; Indian versions of traditional Islamic coin designs were issued by the sultans who followed Muhammad bin Sam as rulers in India (Figs. 40 and 41).²¹

The states of Southern India which were able to hold out against the Islamic invasion retained elements of traditional Indian coin design, particularly the use of symbols, such as the fish on Chola coins and the crocodile on Chera coins (Figs. 42 and 43).²² In the tenth to eleventh century the Western Chalukya dynasty in Karnataka resurrected the punch-marking method of manufacture for their gold coinage. The punch-marks were religious symbols, such as the boar incarnation of Vishnu, and individual letters of inscriptions (Fig. 44). Their issue was continued by the Yadavas into the thirteenth century.

From the sixteenth century the establishment of the Mughal Empire reinforced the use of Islamic inscriptional designs by introducing a fresh wave of Islamic influence from Central Asia, particularly the use of decorative scripts of Iranian origin (Fig. 45).²³ In the same period European settlements around the Indian coast began to introduce European coins into India. The first local European style issues were made in the Portuguese settlement at Goa in western India (Fig. 46).²⁴ They had European religious and heraldic designs, but were denominated according to the local Indian monetary systems. British issues in western India, made at Bombay, initially followed the same pattern, but with more emphasis on heraldic designs (Fig. 47). Coinages produced later at Bombay and at the British settlements on the eastern coast, particularly Madras and Calcutta, also followed the local monetary systems, but were more



38. Base gold tanka of Mu'izzuddin Muhammad bin Sam , as conqueror of northern India, AD 1173–1206. Front: seated figure of four-armed Sri; back: inscription: Sri Mahamada vina Sama, identifying issuer. Both sides are based on the gold tankas of the Hindu rulers in northern India (as no. 62).



42. Silver coin of Rajendra Chola, Chola king in southern India, c. AD 1012–1044. Front: the Chola dynastic symbol of two fishes, with a lion, bow and umbrella; back: identifying the king as issuer.



39. Gold multiple dinar of Mu'izzaddin Muhammad bin Sam, AD 1173–1206, struck at Ghazna: Front: Arabic religious inscription; back: Arabic inscription naming the sultan, the mint and the date AH 600 = AD 1204.



43. Silver coin of the Vira Keralas, Chera rulers in southern India, 11th century AD: Front inscription naming the Vira Keralas as issuers with Crocodile symbol; back: inscription giving title of issuers, with spider symbol.



44. Gold punch-marked coin of Rajaraja, Chalukyan king in southern India, c. AD 1019–1061. Front: punch mark with boar symbol of Chalukyas, surrounded by six punch marks naming the issuer; back: impression of punch marks on front.



40. Gold square double tanka of Ghiyath Shah, sultan of Malwa, AD 1468–1500. Front and back: Arabic inscription identifying the sultan as issuer.



41. Silver tanka of Muhammad Shah II, Khilji sultan of Delhi, AD 1296–1316. Front and back: Arabic inscription identifying the sultan as issuer. The inscription on the back calls Muhammad the 'Second Alexander'.



45. Gold mohur of Akbar, Mughal emperor of India, AD 1556–1605. Front: Arabic religious inscription; back: Arabic inscription identifying the issuer.



46. Silver two tanga of the Portuguese colony at Goa in western India, dated AD 1656. Front: Christian saint St John, with his initials; back: arms of Portugal, with initials of Goa.



50. Gold pagoda of the British East India Company's Madras presidency, c. AD 1678–1740. Identical coins were also issued by the Dutch East India Company's colony at Negapatam. Front: simplified image of the god Venkateshwari, a South Indian aspect of Vishnu, copied from a Vijayanagar kingdom coin; back: dotted pattern.



47. Silver rupee (Angelina) of the British East India Company's Bombay presidency (Mumbai), dated AD 1687. Front: Latin inscription identifying the coin as an issue of Bombay, beseeching god and giving the date; back: arms of the Company.



51. Silver rupee of the British East India Company, 1835, minted at Calcutta. Front: bust of William IV, king of Great Britain, with English inscription giving his name; back: laurel wreath, with English inscription naming the issuer, denomination and date, and Persian inscription naming denomination.



48. Silver rupee of the British East India Company's Madras presidency (Chennai), dated regnal year 4 = AD 1751, minted at Madras (with the mint name 'Arcot'). Front: Persian inscription naming the Mughal emperor Ahmad Shah; back: naming the mint, giving the regnal date (year 4 of Ahmad Shah) and the lotus emblem of the British mint at Madras.



52. Gold ashrafi (mohur) of Wajid 'Ali Shah, king of Awadh in northern India, dated AH 1266 = AD 1850, minted at Lukhnow. Front: emblem of king, two mermen holding banners flanking a crowned shield with a pistol and umbrella above and swords and cannons below, with Persian inscription naming the mint and giving the regnal date, year 3; back: inscription identifying the king as issuer and giving the date.



49. Gold mohur of the British East India Company's Bengal presidency, dated AH 1196 = AD 1782, minted at Calcutta (Kolkota). Front: Persian poem naming the Mughal emperor, as 'defender of the faith of Muhammad, shadow of the divine favour, who puts his stamp on the seven climes'; back: naming the British Mint at Calcutta, Murshidabad, the date of issue and the flower mark of the mint. The regnal date year 19 is a fixed date.



53. Silver rupee of Tukoji Rao II, ruler of the princely state of Indore in western India, dated AH 1280 = AD 1863, minted at Malharnagar. Front: Persian inscription naming the Mughal emperor Shah Alam II, with branch emblem and date; back: Persian inscription naming mint and regnal date (of Shah Alam II), year 110, with branch and sun-face emblems of Indore.

fully integrated into the Indian monetary system as they adopted Indian coin designs, either from Mughal issues or from the Indian designs of the local rulers in southern India (Figs. 48–50).²⁵

The impact of European designs on the Indian coinage tradition was therefore limited until the nineteenth century when British economic power and growing political dominance encouraged the British East India Company to replace Indian designs with its own insignia and British inscriptions, introducing at the same time steam-powered coining machines to replace India's traditional hand-powered technology. From 1835 the Company's issues bearing the head of the British monarch or a heraldic design, but still denominated according to the local system, became the sub-continent's dominant currency (Fig. 51).

As Mughal Imperial power declined from the seventeenth century under European pressure, internal dissent and the rise of local independent principalities, the Mughal coinage system was adapted by the local princes with a reassertion of the traditional use of symbolic designs and many square issues were also introduced (Figs. 52–56).²⁶

The major impact of foreign influence seems to have been felt when foreign invaders bringing coinage traditions of their own achieved such a high level of control that they were able to introduce elements of their own tradition into the Indian monetary system. In the case of Muhammad bin Sam his first issues were exact replicas of local issues, only replacing his own name in the local script for that of the rulers he had conquered. British East India Company issues retained most aspects of the local coinage systems until the early nineteenth century when its economic and political control of India gave it the confidence to impose European designs and standards on Indian coinage.

The role of coin design in the Indian tradition

The longevity of many coin designs within the Indian coinage tradition has created another characteristic feature distinguishing it from the coinage traditions of Europe and the Islamic World. The retention of features which have long ceased to have a function relevant to the identity of the issuer has served to detach Indian coinage from the strongly political nature of most European and Islamic coin designs. In Europe, from Greek times, the use of portraits, religious imagery, heraldic devices and inscriptions has been systematically used to identify the issuing authority responsible for the production of coinage and its circulation. In the Islamic world the inscriptional designs refer to the authority of the Islamic religion of those producing and regulating coin issues and normally also name the mint and date of issue and later the ruler responsible. Under Greek and transformed



54. Copper square paisa of Ram Singh, ruler of the princely state of Bundi in northern India, AD 1829 minted at Bundi. Front: Persian inscription naming the Mughal emperor Muhammad Akbar II; back: Persian inscription naming the mint and giving the regnal date (of Muhammad Akbar II), year 24, with lotus and fan emblems of Bundi.



55. Copper square paisa of Ram Singh, as ruler of Bundi, AD 1879. Front: English inscription naming Queen Victoria and giving date; back: Hindi inscription identifying Ram Singh as worshipper of Siva and the date Vikrama era year 193[6].



56. Silver rupee of Jaswant Singh, as ruler of the princely state of Bharatpur in northern India, AD 1858, minted at Brajindrapur. Front: bust of Queen Victoria, with Persian inscription identifying Victoria as the exalted queen who rules England and giving date; back: Persian inscription stating that the coin is issued by the state supported by the British Government, the mint and date Vikrama era year 1914.

Greek and later Islamic and European influence the concept of making designs to identify the issuer are not alien to the Indian coinage tradition, but the main purpose of coin design in India has often been separated from this function.

In several contexts the identity of the issuer is completely absent from the coin. The most extreme examples are the imitation-Sasanian issues of western India, which continue for about seven centuries without systematic indication of the issuer, either by dynasty, royal name or mint name.²⁷ The function of the design seems to be simply to identify the coin as current money. The closer the design is to that of earlier coins the better it corresponds to this purpose.

On some cases a static design continues over several centuries, with the only reference to individual



57. Copper coin of the Lichhavi kingdom of Nepal, 7th century AD. Front: reclining bull, with Brahmi inscription above, naming Siva (Pashupati); back: sun disc.



61. Base silver drama (jital) of Prithvideva III, Chauhan king of Ajmir and Delhi in northern India, c. AD 1179–1192. Front: Horseman and inscription identifying the king as issuer; back: reclining bull with inscription copied from Shahi coin (Sri Samantadeva).



58. Silver tanka of the Harikela kingdom (Chittagong in south-eastern Bangladesh), 9th century AD. Front: reclining bull with eastern Brahmi inscription above, naming the kingdom; back: Srivatsa symbol (representing Sri), with garlands, dots representing water below and sun and moon (not visible) symbols above.



62. Gold tanka of Gangeyadeva, Kalachuri king of Dahala (Tripura), c. AD 1015–1040. Front: four-armed goddess Sri, seated on lotus and holding lotuses in her upper hands; back: inscription identifying king as issuer.



59. Silver tanka of Dharmachandra, king of Arakan (western Burma), 10th century AD. Front: reclining bull with eastern Brahmi inscription above, identifying the king as issuer; back: Srivatsa symbol, with garlands, dots representing water below and sun and moon symbols above.



63. Gold coin of the Samatata kingdom (eastern Bangladesh) under Pala rule, 10th century. Front: standing king holding bow and arrow, with crescent-moon standard, inscription names the king as moon of Bengal; back the goddess Sri, seated on a lotus and holding a lotus and a noose.



60. Copper coin of the Chola kingdom of Sri Lanka, 9–10th century. Front: reclining bull, with conch emblem of Vishnu above; back: three fish (symbol of the Cholas) and garland above.



64. Gold coin of Krishna II, Rashtrakuta king of western India, c. AD 939–967. Front the goddess Sri seated on lotus, flanked by elephants on lotus stems; back: conch shell emblem of Vishnu, with inscription identifying king as issuer; both sides have border imitating Arabic script.

issuers being inscriptional, but with large parts of the inscription illegible as they disappear off the edge of the coin. The identification of the issuer is itself a conventional aspect of coin design, serving again only to reinforce the identity of the coin as current money.

The role of coin design in the Indian tradition appears therefore to be more strongly attached to the concept of continuity as a means of maintaining the functionality of the coinage within the monetary system, than it does to the European and Islamic coinage traditions' emphases on authority as the principle means of ensuring that functionality.

The apparent detachment of coin design from the concept of authority also explains the absence of coinage in some parts of India during the medieval period. In Europe and the Islamic World the authority exercised over the issue of coins by states and rulers sometimes led to the production of coins simply as a means of expressing sovereignty, the issue of coins being seen as part of the process of demonstrating the issuer's right to rule. In India a different view appears to have prevailed in the medieval period. Even though the Guptas had followed the Kushan practice of making royal issues of gold coins for each reign, later dynasties of comparable wealth and importance, such as the Vakatakas, Rashtrakutas, Palas and Senas saw no need for such issues, because they had no regular need for coinage as money. So far only one Pala coin has been discovered and its design suggests that it was issued in eastern Bengal where gold coinage had continued after the end of the Gupta dynasty. Textual evidence shows that monetary transactions did not disappear with the demise of coinage, but that cowrie shells and gold dust were used as money in place of coins. A few Vakataka and Rashtrakuta coins have been discovered, but in very limited numbers.²⁸

In some studies the changing volume of issue of currency has been used as an indicator of economic decline, particularly in the post-Gupta/pre-Islamic period: "Contraction of money also indicates the decline of crafts and industries... The paucity of metal coinage indicates less trade..."²⁹ Such an analysis does not, however, take account of the specific characteristics of the Indian coinage tradition, where continuity of design obscures the chronological distribution of coinages and official attitudes towards the production of coinage do not fit the analytical understanding created by studying European coinages.

A pan-Indian tradition

Although the arrival of Islam brought about a transformation of coin design in the parts of India coming under Islamic rule and created a separation between coin design in the Islamic North and the Hindu South, the Indian coinage tradition can still be

considered a unified force for the whole of the sub-continent. In the nineteenth century symbolism, used by local princes to identify their Mughal-style issues, again became a significant factor in coin design, re-establishing a commonality embracing the former Mughal territories with the Hindu South as well as the Hindu kingdom of Nepal and neighbouring Buddhist Tibet.

The pan-Indian nature of the tradition is, nevertheless, more strongly defined and recognisable in the pre-Islamic period. The widespread use of similar designs indicates a common view of the nature of coinage across the sub-continent.

During the medieval period a small repertoire of designs was widely used by small kingdoms in many parts of the sub-continent. The most predominant were a reclining bull and a seated goddess. In the seventh-eighth century coins with the reclining humped bull design, normally with an inscription above the bull's back, were being issued in Afghanistan and northern Pakistan (Fig. 36), Nepal (Fig. 57), Bengal (Fig. 58), Burma (Fig. 59) and Sri Lanka (Fig. 60). The Nepalese design seems to have provided the inspiration for the Burmese design, which then spread to Bengal and Sri Lanka, where it survived for several centuries. During the eighth to thirteenth centuries the Afghan and Pakistan versions spread across northern India and became the standard design for low-denomination base-silver and bronze coins (Figs. 61 and 37).

The design used on most high-denomination gold coins in northern India from the eleventh to thirteenth centuries was a figure of the Hindu goddess Sri, seated on a lotus (Fig. 62).³⁰ This design seems to have been derived from an earlier Bengal design (Fig. 63), itself derived via Gupta coinage from a Kushan prototype (Figs. 20 and 21). It survived in Bengal until the ninth century when it also spread to the western Indian Rashtrakuta kingdom (Fig. 64) before its wider adoption in northern India during the eleventh century. The latest issues with this design were made about 1200 in the name of the Ghurid ruler Muhammad bin Sam (Fig. 38). A version of this seated goddess design, adapted from the Bengal issues, also appeared on Sri Lankan gold coins in the 8th to 9th centuries (Fig. 65) and in the eleventh century it spread into the Chola kingdom of South India, where the initial gold issues were soon reduced to a copper coinage (Fig. 66).

This widespread use of similar designs can be traced back to the late-second century BC to first century AD, when the issue of silver punch-marked coinage had ceased, but it was still in circulation in many parts of the sub-continent. As the silver punch-marked coinage, and the cast copper coinage which accompanied it, had gone out of production, local copper coinages began to proliferate. They used designs derived from the punch-marked and cast coins, but also gradually began to show



65. Gold coin of Chola kingdom of Sri Lanka, 9–10th centuries. Front: Vishnu holding conch, seated on mat, with inscription, Sri Lankaviha; back: Sri holding lotus, standing on lotus stem flowing from conch, flanked by sriyatsa and five circle symbols.



66. Gold coin of Rajaraja, Chola king in Sri Lanka and southern India, c. AD 958–1016, issued in Sri Lanka. Front: Vishnu holding conch, seated on mat, with inscription identifying king as issuer; back: Sri holding lotus, standing on lotus stem flowing from conch, flanked by sriyatsa and five circle symbols.



67. Copper square coin of the Audumbaras, Punjab, c. 50 BC. Front: square pillared temple with double-level roof, with trident and battle axe standard, water symbol and Brahmi inscription identifying king Rudradasa as issuer; back: elephant facing tree in railing, with Kharoshthi inscription translating the Brahmi inscription.



68. Copper cast coin of Kosambi city, c. 100 BC. Front: elephant facing triangular-headed standard, with water symbol below and Brahmi inscription above, identifying king Sivadeva (?) as issuer; back: tree in railing with uncertain standard within a creeper.



69. Copper square cast coin of Ayodhya city, c. 100 BC. Front: elephant facing triangular-headed standard supporting a crescent, and Brahmi inscription above, identifying king Vayudeva as issuer; back: four-part nandyavardana symbol with water symbol below, four-armed lunar cycle symbol above, tree in railing on right and plant symbol on left.



70. Copper square coin of Ujjain city, c. 50 BC. Front: elephant facing tree in railing, with water symbol, containing fish below and chakra and four-armed lunar cycle symbol above; back: four-armed lunar cycle symbol.



71. Copper square punch-marked coin of Eran city, c. 100 BC. Front: five punch-marks: elephant with raised trunk, triangle-headed standard, water symbol with fish and turtles, nandyavartana symbol in shrine and six-armed symbol; back: blank



72. Copper square coin of Satakarni, Satavahana king of southern central India, c. 25 BC. Front: elephant with raised trunk, Brahmi inscription above identify the king as issuer, with triangle-headed standard and water symbol with fish below; back: tree in railing with sun and four-armed lunar cycle symbol with crescent.



73. Copper square coin of the Pandyan Kingdom, southern India, c. AD 10. Front: elephant facing trident and battle axe standard, with row of symbols above: tree in railing, triangle-headed standard, water-pot, crescent moon, sriyatsa, spear head, chakra; back: Pandyan fish emblem.

signs of influence from the Greek coinages of the north-western corner of the sub-continent. The local copper coins used both the punch-marked and the cast technologies, but were soon also being made by striking between paired dies in the Greek manner. One of the commonest designs was an elephant accompanied by a triangle-headed standard. The standard could also be substituted by a different standard, such as a trident. The elephant and standard design had been commonly used on the cast coins issued alongside the silver punch-marked coinage. The elephant and triangle-headed standard had also appeared as separate symbols on occasional silver punch-marked coins. Examples of the elephant and standard have been recorded on the local copper coins from the tribal states of the Punjab, and in the kingdoms of Kosambi, Ayodhya, Ujjain and Eran and further south on issues of Satavahana, Pandya, Chera and Sri Lankan kings (Figs. 67-75).

As well as illustrating the unity of the concept of coinage across the sub-continent, awareness of the existence of this common coinage tradition is an important tool for the modern numismatist. In a coinage where rulers are rarely named, or if named are not otherwise known, the evolution of coin design is a crucial indicator of relative chronology. Of the issuers of coins with elephant standard designs mentioned above only the Satavahana royal issues can be dated with any certainty, because of their well-established relationship with Nahapana the king of Broach named in the mid-first century AD Greek text the *Periplus of the Erythraean Sea*.³¹ The gradual spread of coinage ideas from northern Indian to southern India enables the Satavahana issues to mark the period when the northern ideas had already penetrated the Deccan on their way to inspire coin issue in the Pandya, Chera and Sri Lankan kingdoms. The earliest Sri Lankan issues, which use Greek die-striking technology to make coins with designs derived from Deccan and South Indian coins must therefore be dated no earlier than the beginning of the first century AD.

Tracing the origins of the Indian coinage tradition

The study of the sequence and pace of the evolution of coinage within the Indian coinage tradition also provides the key to understanding the nature of the origins of the phenomenon of coinage in the sub-continent. Archaeological records and numismatic studies have shown that the earliest coinages in India are the various issues of silver punch-marked coins. These began in northern India and later spread to southern India and Sri Lanka. In the North they have been found right across the sub-continent from Afghanistan to Bengal. The date of the end of the issue of silver punch-marked coinage has been accurately placed in the middle of the second century BC

by the discovery in northern Afghanistan of a small hoard of late punch-marked coins in a datable context. The hoard, found in the treasury of the Greek site of Ai-Khanum on the Amu-Darya River (the ancient Oxus), contained coins of the latest phase of silver punch-marked coins to be issued in northern India together with coins from the Kabul region in the name of the Greek king Agathokles, who ruled about 180 BC. The site was sacked by Central Asian nomads by about 130 BC. The hoard shows that the last phase of silver punch-marked coins was available for storage in the Ai-Khanum treasury some time between about 180 and 130 BC.³²

The identification of the coins found at Ai-Khanum as issues of the last phase of punch-marked coinage was made by the Indian scholar P.L. Gupta and his British collaborator Terry Hardaker in their ground-breaking study of the sequence of the main series of punch-marked coinage in 1985.³³ They attribute this coinage (Fig. 76), with its characteristic set of five punches to the Mauryan emperors and their predecessors the kings of Magadha, and identified seven phases of issue. Since then Hardaker has also studied the second largest group of punch-marked coinage with four punches (Fig. 77), recording five phases of issue, and demonstrated that it began before the main five-punched series.³⁴ He placed its later phases (Fig. 78) as contemporary with the earlier phases of the series attributed to Magadha-Maurya. He attributed this series to the kings of Kosala and explained the end of the series as the conquest of Kosala by Magadha, with a proposed date of about 460 BC.

Recently new examples (Fig. 79) of the series attributed to Kosala by Hardaker have been found which are earlier and connect it to what was previously seen by Gupta as a separate series, the so-called cup-shaped punch-marked coins (Fig. 80), which he attributed to the kingdom of Kasi and dated before the conquest of Kasi by Kosala in the late seventh century.³⁵

The cup-shaped coins seem to represent the earliest evolutionary stage in Indian coinage (Figs. 81-83).³⁶ Alongside the so-called Kasi, Kosala and Magadha coinages there are several other series of early punch-marked coins in northern India. They all share characteristics of design and technology with these three series and can be seen as derived from them. None of them show features which can be explained as precursors of the features of the cup-shaped coinage. There is however a series of punch-marked coins from the north-western corner of the sub-continent, the so-called bent bar coinage (Figs. 84 and 85), which shares the features of the cup-shaped coinage. These features are slightly different from those of the cup-shaped coins, but not related to the shared features found on derivatives of the cup-shaped coins.

I have suggested elsewhere that the relationship



74. Copper square coin of the Chera Kingdom, southern India, c.AD 10. Front: elephant facing trident and battle axe standard in railing, with row of symbols above: arched hill and nandyavartana; back: Chera bow emblem and elephant goad.



78. Silver local punch-marked coin of the Mauryan period, Gangetic Plain, early 3rd century BC. Front: three S-shaped symbols round dot, nandyavartana in shrine, elephant and full moon with new moon; back: three added marks.



75. Copper coin of Sri Lanka, c.AD 50. Front: elephant, with tree in railing, triangle-headed standard, arched hill and Sri Lankan swastika standard, within circular water symbol; back: arched hill and Sri Lankan swastika standard between triangle-headed altar and nandyavartana symbols.



79. Silver local punch-marked coin of the pre-Mauryan period, Gangetic Plain, early 4th century BC. Front: four punch-marks: two circular symbols and a sun symbol (stamped twice); back: five added marks.



76. Silver local punch-marked coin of the Nanda or Mauryan kings, late 4th century BC. Front: five punch marks: sun, six-armed symbol, bow, full moon surrounded by crescent moon and stars, bow and elephant, with one circular added mark; back: eight (bankers') marks added after issue.



80. Silver local cup-shaped punch-marked coin of the pre-Mauryan period, Gangetic Plain, early 4th century BC. Front: four punch-marks: two circular symbols and a sun symbol (stamped twice); back: six added marks.



77. Silver local punch-marked coin of the pre-Mauryan period, Gangetic Plain, mid 4th century BC. Front: four punch-marks: circular symbol, hare looking back, three S-shaped symbols round dot (stamped twice); back: blank.



81 Silver local cup-shaped punch-marked coin of the pre-Mauryan period, Gangetic Plain, c. 400 BC. Front: four punch-marks: two circular symbols and a smaller circular symbol (stamped twice); back: blank.



82. Silver local bar-shaped punch-marked coin of the pre-Mauryan period, Gangetic Plain, c. 400 BC. Front: two punch-marks: two circular symbols (same as those on no. 81); back: blank (pressed through impression of front, with modern cloth pasted on to prevent breakage). This coin is an eighth of no. 81.

between the bent bars and the cup-shaped coinage is so close that the cup-shaped coinage must have been copied from the bent bar coinage. They not only share the same style of punch, arranged in a similar pattern, but also share a curved form of flan. They also both have a denomination system which includes fractional coins: a system absent from all later punch-marked coins. The lower denominations of the cup-shaped coins are exact matches in form to the bent bar coins.

There is, however, a chronological and a historical problem with the proposal that the bent bar coins provide the prototype for the cup-shaped coinage, when placed alongside the system proposed by Hardaker and Gupta. On the basis of a hoard found by French archaeologists in Kabul, the Chaman Hazouri hoard, the earliest phase of the bent bar coinage should be dated during the fourth century BC.³⁷ This hoard contains Greek coins mostly of the fifth century and one Iranian imitation of an Athenian coin dated between about 390 and 350 BC. The hoard therefore provides evidence that early bent bars were available for hoarding in the mid-fourth century BC. The hoard also contained a group of locally made adaptations of Greek coins (Fig. 86-87), which seem to provide a missing link between Greek coinage and the bent bars. Small denomination bent bars are indistinguishable from the smaller denominations of these local adaptations of Greek coinage.

The dating of the bent bars to the fourth century BC by this hoard and the dating of the cup-shaped coins by Gupta to the late seventh century therefore seems to be in conflict with the suggestion that bent bars were the prototype for the cup-shaped coins. The dating can be brought closer together when the basis for Gupta's dating is analysed. All the dates he uses are based on a chronology for early Magadha kings related to the parinirvana of the Buddha in 483 BC. This chronology has been seriously questioned in recent scholarship³⁸ and perhaps allows the late seventh century date for the cup-shaped coins to be moved about a century later. This revision still places the cup-shaped coins in the late sixth century, i.e. at least a century earlier than the Chaman Hazouri date for the bent bars.

Elsewhere I have questioned Gupta and Hardaker's attribution of the cup-shaped and later punch-marked coins to the kingdoms of Kasi, Kosala and Magadha on which they base their chronology.³⁹ Their attribution is conjectural as there is no indication in the designs on any of these coins as to who issued them. It can only be shown that they were issued according to a system which suggests a centralised issue system for each series. If the attributions are not accepted then the chronology they suggest is equally conjectural and therefore the dating suggested by the Chaman Hazouri hoard gains more relevance for dating the earliest phase of Indian coinage in the fourth rather than the seventh or



83. Silver local cup-shaped punch-marked coin of the pre-Mauryan period, Gangetic Plain, c. 400 BC. Front: one punch-mark: circular symbol (same as on no. 81); back: blank (pressed through impression of front). This coin is a sixteenth of no. 81.



84 Silver local bar-shaped punch-marked coin of Achaemenid kings of Iran, Kabul region, c. 400 BC. Front: two punch-marks: circular symbol (stamped twice); back: blank.



85. Silver local cup-shaped punch-marked coin of Achaemenid kings of Iran, Kabul region, c. 400 BC. Front: one punch-mark: circular symbol; back: blank. Quarter of no. 84.



86. Silver local die-struck coin of Achaemenid kings of Iran, Kabul region, c. 450 BC. Front: arrow head; back: circular symbol.



87. Silver local die-struck coin of Achaemenid kings of Iran, Kabul region, c. 450 BC. Front: unidentified creature; back: goat looking back below tree.

sixth centuries.

It should be noted, however, that the dating provided by the Chaman Hazouri hoard is the dating when the earliest phase of bent bars were available for hoarding. It does not provide a date for when they were first issued or when they were first available as a prototype for the cup-shaped coins. It would not be impossible to push the date of their first issue into the late fifth century BC and therefore to date the cup-shaped coins to the same period, but earlier seems implausible.

Indian coinage tradition and Indian monetary tradition

The evidence of the Chaman Hazouri hoard suggests that the prototype of India's first coinage, i.e. the bent bar coinage, was itself an adaptation of a local Afghan imitation of Greek coinage. This raises the question whether it is appropriate to suggest a Greek origin, i.e. a western origin, for the Indian coinage tradition. The down-dating of its origins to the late fifth or fourth century certainly makes such an origin historically possible, whereas Gupta's earlier dating places the origins of Indian coinage earlier than the invention of coinage in the West (i.e. before about 600 BC).

It is therefore important to examine the question whether it would be plausible for India to adopt a silver coinage in the late fifth to fourth century (or earlier if Gupta's chronology were used) on the basis of what is known about monetary traditions in India before the first coins appeared. The documentary evidence from early Indian textual sources suggests that before coinage appeared the commonest means of payment were cattle or gold necklaces (niksha). Evidence of such means of payment first appear in Vedic texts and is still present in the Buddhist Jatakas. There is no evidence of silver being used in payments earlier than the grammar of Panini. Although this text has been dated as early as the seventh century, recent scholarship suggests a later date and recently Falk has suggested that it would be better dated on the basis of its reference to coined silver money, than coinage being dated by the supposed date of the grammar.⁴⁰

In contrast with Indian monetary practice, there is plentiful evidence from the Achaemenid Empire that silver both as bullion by weight and in the form of coins was part of a well-established tradition reaching back to the earlier Mesopotamian practice of making payments of weighed out silver. The Chaman Hazouri hoard suggests that Achaemenid monetary practice was brought into the empire's eastern provinces in Afghanistan as another part of its local administration.

The use of silver coinage in India, therefore appears to represent a break in India's earlier monetary

traditions of using cattle and gold ornaments.⁴¹ The simplest explanation for this break is to suggest that India's coinage tradition originated as an idea imported from the Greek world via Achaemenid Afghanistan and that this new idea found fertile soil and has since flourished as an independent, but hospitable, tradition for almost two and a half millennia.

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NOTES

1. Cribb 1983, 1985, 1995 and 1996.
2. Grierson 1975, "The coins of India, using the word here in its geographical sense, ...form a distinct branch of numismatics..." (p. 44).
3. Schlumberger 1953; Walsh 1939.
4. Bopparachchi 1991.
5. Errington and Cribb 1992, pp. 60–63; Allan 1936.
6. Cribb 2000, pp. 42–3.
7. Jha and Rajgor 1992.
8. Allan 1914.
9. Mitchiner 1979, pp. 49–53.
10. Senior 2001; Göbl 1984.
11. Göbl 1960.
12. Raven 1994.
13. Mukherjee 1993, Mitchiner 2000.
14. Mitchiner 1979, pp. 34–39.
15. Allan 1914; Göbl 1967.
16. Cribb 1990.
17. Göbl 1967.
18. Deyell 1990.
- 19–21. Goron and Goenka 2001. The use of square frames in Islamic coin designs can be traced back to coins of the early eighth century, but became more widespread once it had been adopted for the gold coinage of the Muwahhid rulers of Morocco and Spain in the mid twelfth century. The Muwahhid gold coin was very plentiful as they controlled the trade in West African gold and spread throughout the Islamic world. Muhammad bin Sam copied Muwahhid designs for his own gold coins issued later in the twelfth century.
22. Chattopadhyaya 1977, pp. 51–57, 68–69, 241–254 and 278; Mitchiner 1979, pp. 121–126 and 131. Both Chattopadhyaya and Mitchiner attribute the Uttamachola coinage to a king of that name ruling 973–985, but this coinage appears to be related to the later Chola coinage, with the same lion-bow-fish-umbrella type, of Rajendra Chola (1012–1044), during whose reign the transition of Rajaraja Chola's (985–1016) gold coinage into a silver coinage took place. According to Chattopadhyaya (p. 53) Rajendra adopted the title Uttamachola. The Vira-Kerala coinage should also be dated to this period or soon after.

23. Lane-Poole 1892; Bruce et al. 1981.
 24-26. Bruce et al. 1981.
 27. Deyell 1990.
 28. Bhandare 1998. More Rashtrakuta have since been discovered by Bhandare and myself and are awaiting publication (one of these is illustrated here as no. 64).
 29. Sharma 2001, pp. 148-9.
 30. Deyell 1990.
 31. Cribb 2000.
 32. Audouin and Bernard 1973-1974; Guillaume 1990 (English translation of Audouin and Bernard 1974, pp. 25-116).
 33. Gupta and Hardaker 1985.
 34. Hardaker 1992; Murphy 2001.
 35. Gupta 1979, pp. 14 and 203; Rajgor 2001, pp. 122-138 identify the earliest series as issues of Kasi. Examples of the newly-found pieces, linking the so-called Kasi and so-called Kosala series, are published by Rajgor 2001, pp. 138-149 as issues of Kashi under the rule of Kosala, among them he includes some of the types attributed by Hardaker 1992 to the early Kosala series.
 36. Cribb 1983 and 1985.
 37. Curiel and Schlumberger 1953, Cribb 1983 and 1985.
 38. Cribb 1995; Bechert 1995.
 39. Cribb 1983 and 1985.
 40. Falk 1991, p. 117, n. 29 "Lüders would have liked to date the early coinage with the help of Panini, whereas now it seems safer to date Panini by means of the better known date of the coins".
 41. Dhavalikar 1975 remarked on the sudden emergence of silver coinage in a society which had previously only used gold in payments. "It is indeed surprising that a full-fledged silver coinage was introduced suddenly into India..." (p. 332). "This no doubt makes the occurrence of a fully-fledged silver currency at the dawn of the historical period a glaring contrast" (p. 333).
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