10 Evidence for Early South Asia

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10.A Indic Sources

I Introduction

Agriculture and animal husbandry, along with trade, constitute economics. It is of benefit because it provides grain, livestock, money, forest produce, and labor. By means of that, he [the king] brings under his power his own circle and his enemy's circle using the treasury and the army.¹

When a king gathers levies, taxes, duties, gifts, and fines without providing for protection, he will immediately go to hell.²

When a man has become educated, he enters the householder stage of life and begins the lifestyle of a man-about-town [*nāgaraka*], using the money that he has inherited, on the one hand, or obtained from gifts, conquest, trade, or wages, on the other, or from both.³

These three quotations come from three different traditions of *śāstras*: *artha* (economic pursuit), *dharma* (religious pursuit), and *kāma* (pursuit of desire) respectively.⁴ *Śāstra* is “a verbal codification of rules, whether of divine or human provenance, for the positive and negative regulation of some given human practices.”⁵ The Sanskrit *śāstras* are of two types, *pauruṣeya* (of human origin or compilation) and *apauruṣeya* (of transcendental or divine origin).⁶ The *dharmaśāstras* and the *arthaśāstras*, along with various other treatises, belong to the *pauruṣeya* (human origin).⁷ Together, the *dharmaśāstras* also appear as the pervasive regulator of

1 KA 1. 4. 1–2. Trans. Olivelle 2013, 68. For Sanskrit text of the *Kauṭīliya Arthaśāstra* (KA), see Kangle (1960) 2014a.

2 *Manusmṛti* (MS) 8. 307. For Sanskrit text and trans. Olivelle 2005, 183.

3 *Kāmasūtra* (KS) 1. 4. 1. For Sanskrit text of the *Kāmasūtra* of Vātsyāyana, see Vātsyāyana 1982. For translation see, Doniger and Kakar 2002, 17. The term *nāgaraka* has also been translated as ‘cultivated man’ or literally just a city dweller.

4 *Dharma*, *artha*, and *kāma* are the first three aims and together they make the *trivarga*. The triple group becomes *caturvarga* when *mokṣa* (liberation) is added as the fourth term. These four together constitute the *puruṣārtha*, goals of human life (Malamoud 1982, 37). For a history *puruṣārtha* as a unified concept, see Dwivedi 2016, 48.

5 Pollock 1985, 501.

6 The *śāstras* of transcendent origin incorporate the four *Vedas*, the *Upavedas*, and various ancillaries of the *Vedas*, Pollock 1985, 502.

7 The other subjects of *śāstras* include the knowledge of astronomy/astrology, physiology/medicine, grammar, agriculture, domestication of animals, calculations/mathematics, arts, sculptures and architecture, and many more, (Pollock 1985, 502 n. 18).

behavior for the pursuit of *dharma*, so much so that they can be considered a cultural grammar. They articulate practical and cultural knowledge, mastery over which makes one a competent member of society.⁸ I shall begin the survey of Indic sources with this most important literary genre before treating visual narrative, archaeological remains, epigraphic material, and coinage as sources of economic history.

II Sanskrit *Śāstras*

As the *śāstras* are of a prescriptive and normative nature, they do not intend to represent historical events. There are thus two major challenges when dealing with early literary sources: their dating and their grounding in historical reality. Most of the texts have a history of enlargement at various stages. There are numerous layers of redactions hidden below the visible surface, and dates are ascribed only to the final form. Considering these layers necessitates the dating of a text to a range of years, not only decades but centuries apart. The contents of the texts, moreover, are often considered theological and mythical. Thus the study of history based on these texts relies on the historical-critical method, which developed in the field of biblical studies and was only later applied to Indology. This includes literary criticism, tendency criticism, and determining the history of transmission, including the history of redactions.⁹ However, even if they do not provide chronological history nor historical information, they do have historical value.¹⁰

In recent years, interdisciplinary approaches have proven useful for gaining a better understanding of early Indian texts as historical sources. Such approaches have placed these theological texts in the context of their historical setting by considering words as artifacts.¹¹ Moreover, changes in word use over time have been noted. While studying the *śāstras*, philologists have identified: a) occurrence of foreign words in the texts for their relative dating, b) the embellishment of the language and of its structure, and c) the usage of indeclinable words (*avyaya*) in the texts. In addition to etymological and stylistic studies, changes in the semantic range of words have been analyzed. These can be understood as representative of

⁸ Pollock 1985, 500.

⁹ The historical-critical method is also called text-historical method (Adluri and Bagchee 2014, 1, 11–14). For a criticism of application of these methods on Indic texts, see Adluri and Bagchee 2014.

¹⁰ For further discussion on *śāstras* and other theological texts as historical sources by placing them in historical context, see Olivelle 1993; 2005; 2013. On questions and issues of interpolation and extrapolations in early Sanskrit texts, see Hiltebeitel 1998; 2011.

¹¹ Olivelle 1993, 33. For words as artifact from past societies, see Olivelle 2012, 23.

historical change and increasing social complexity.¹² Examples include studies of the terms *dāna* (gift/donation),¹³ *dharma*,¹⁴ and *artha* (wealth).¹⁵

For the present purpose, three *śāstras* will be discussed as potential sources for economic processes of early India. These are the *Kauṭīliya Arthaśāstra*, the *Mānava Dharmaśāstra* (also known as the *Manusmṛiti*), and the *Vātsyāyana Kāmasūtra*. These provide prescriptions regarding the pursuance of *artha* (livelihood, pursuit of wealth), *dharma* (religious and social duty), and *kāma* (pleasure, culture, and education). Tradition has it that these three genres of knowledge treatises have branched off from ‘the grand revelation.’¹⁶ Regarding their use as historical sources, scholars have used them in three ways: first, as representations of practice as well as instruction for practice;¹⁷ second, as reactions to changing social customs determined by non-Brahmanical ideals and practices;¹⁸ and third as indicators of recommended behavior during extraordinary circumstances.¹⁹

II.1 The *Kauṭīliya Arthaśāstra*

The term *arthaśāstra* means treatise or manual (*śāstra*) of wealth, economy, and statecraft (*artha*). It is the science of politics, administration, and economic policy.²⁰ The *arthaśāstra* available to us and most commonly used as historical source is the *Arthaśāstra* of Kauṭīliya or the *Kauṭīliya Arthaśāstra* (*KA*). Yet the *KA* is part of a larger tradition of *artha* known from several previous authorities.²¹ A long tradition of *arthaśāstra* is further corroborated by the discovery of a birch bark manuscript of

¹² Here it is important to distinguish between semantic etymology and historical etymology. As Bronkhorst defines them, a historical etymology is about the origins or early history of a word, while the semantic etymology is about how a word connects with one or more to elucidate its meaning, Bronkhorst 2001, 147–148.

¹³ Thapar 1978; Nath 1987; Endo 1987; Findly 2003.

¹⁴ Horsch 1967; Olivelle 2006; 2009; Hildebeitel 2011.

¹⁵ Dwivedi 2016, 32–56.

¹⁶ The grand revelation is 10,000 chapters revealed by Prajāpati. From it, three specialized branches were reproduced into a thousand chapters by: Manu, who compiled the separate treatise on *dharma*; Bṛhaspati, who wrote on the *artha*; and Nandi, who collected those chapters dealing with *kāma*. See *KS* 1. 1. 4–17. A similar description is also found in the *Mahābhārata* (*Śāntiparva* 59. 80–85).

¹⁷ Pollock 1985.

¹⁸ Olivelle 2005, 42–43.

¹⁹ Doniger and Smith 1991, lviii, lix.

²⁰ The *KA* is variably defined as “the science of resource management and administration” (Ramaswamy 1962), “the science of statecraft or of politics and administration” (Krishna Rao 1953), “text-book of power” (Doniger and Kakar 2002), “science of wealth” (Trautmann 2012), and “Treatise on Success” (Olivelle 2013). It is noteworthy that *arthaśāstra* in the modern context is the term for economics or political economy in the modern Indian language, Hindi (Vira 1951).

²¹ Trautmann 2012.

nīti/*arthaśāstra* tradition in Kharoṣṭhī script from Bajaur district in Pakistan dated between the first two centuries CE.²² The *arthaśāstra* is also mentioned in various later texts as a science and a topic of education, such as in the *Mahābhārata* (third century BCE–fourth century CE)²³ and in *nīti* (policy and diplomacy) texts from the fourth through the thirteenth century.²⁴ Research on the *Kauṭīliya Arthaśāstra* began in 1905 when the Mysore Government Oriental Library received a copy of the manuscript from an anonymous *paṇḍit*.²⁵

The identification of Kauṭīliya with Cāṇakya, also known as Viṣṇugupta, the wise mentor and later a minister of Candragupta Maurya, led to the assumption that it may be dated to the late fourth century BCE. The Cāṇakya-Candragupta tradition was based on a legend recurring in Indic literature in different Sanskrit, Pali, Tamil, and Telugu texts.²⁶ Based on this, the *KA* was considered an administrative guidebook from the Mauryan period.²⁷ However, many scholars suggest Cāṇakya is fictional, which calls the historicity of Cāṇakya/Viṣṇugupta into question.²⁸ It is also suggested that the text may have been composed between the second and first centuries BCE, with successive enlargements and a major redaction in the first or second century CE.²⁹ These debates notwithstanding, there is no denying that the text draws from an earlier tradition of political and economic scholarship and thought.

The *KA* consists of 15 books (*adhikaraṇa*) in 180 sections (*prakaraṇa*), which are divided into 150 chapters (*adhyāya*) with a total of 6,000 sentences.³⁰ The text is mostly prose, with concluding remarks in verses called *śloka*s, written in the meter of 32 syllables. The first five *adhikaraṇa*s deal with the administration of the state (*tantra*), and the following eight deal with relationships with neighboring states (*āvāpa*), while the last two are miscellaneous in character.³¹ The text, bring-

22 This is found on the obverse (recto) of fragment 9 of the collection. The manuscript collection was reported in 2006 and found in the ruins of a Buddhist monastery near the Bajaur River in Gandhāra. The same collection also has an interesting legal document recording a loan on fragment 15 (Strauch 2008).

23 Like other early literary works, the dating of the *Mahābhārata* is also a highly debated subject. Commonly described as an epic, the *Mahābhārata* is the longest poem in the world, boasting of its encyclopaedic nature about the issues of *dharma*, *artha*, *kāma*, and *mokṣa*. It consists of nearly 75,000 verses. It is suggested that the epic may have consisted of bardic material, which in time grew to include more religious and didactic material, Brockington 1998, 2, 19–21.

24 For a discussion on how the knowledge tradition grew and has reflections in later texts, see Kangle (1965) 2014b, 6.

25 For the impact of the discovery of the *KA* on the history writing, see Voigt 1966; Mishra 1989.

26 See, Kangle (1965) 2014b, 104–115; Trautmann 1971, 10–67; McClish 2012, 280–286.

27 V. A. Smith 1908, 134; Shamasastri and Narain 1915.

28 Jolly and Schmidt 1923 were the first to suggest the *KA* post-Mauryan.

29 McClish 2009, 315; Olivelle 2013, 6–25.

30 However, a different manuscript suggests there may have been 180 chapters, (Kangle [1965] 2014b, 19–20; Trautmann 1971, 68–78). Olivelle too, in his translation, divides the work into 180 chapters in total, Olivelle 2013.

31 Olivelle 2012, 24. See also Olivelle, Brick, and McClish 2015, 77, 172.

ing together the teachings of earlier works in the *artha* tradition, focuses on the administration of state affairs and thus highlights economic perspectives of the state. Yet it is a guide for kings and the state to protect and facilitate the livelihood (*vārttā*) of every individual. It includes detailed definitions of a state as an organic entity with seven elements (*prakṛti*): king or lord (*svāmī*), minister (*amātya*), countryside (*janapada*), fort (*durga*), treasury (*kośa*), army (*daṇḍa*), and ally (*mitra*). Measures are suggested to strengthen all seven elements of a successful state. The state is to regulate and gather resources, channel resources for the maintenance of a strong army, have overt and covert diplomatic policies, and manage resources to avoid and manage calamities. It has often been compared to works of various Western political writings.³²

The intended audience for the text may have been princes, rulers, and administrative officials. The text includes matters concerning the education of a prince (*vijigīṣu*, the potential world conqueror) and how he should conduct himself in the various situations that are likely to arise in the course of his rule.³³ It also suggests how to hire ministers,³⁴ how much their salaries should be, and the various duties of the superintendents (*adhyakṣas*) of different departments.³⁵ It recommends the surveillance of artisans, traders, and suspicious people in different offices through the use of secret agents as a measure against potential threats to the state and king.³⁶ Among its legal regulations are grounds for litigation, various conditions for the transfer of properties, ways to address issues about the nonpayment of debts, types of punishment, relation between property and owner, and rules governing slave and laborers discussed under the topic of *Dharmasthīyam* (On Justices).³⁷

Kauṭilya's state is a bureaucratic system with a hierarchy of officials, each with well-charted duties. He enumerates the designated salaries for officials and criteria for setting them in fixed terms. The highest recommended salary is 48,000 *paṇas*. Below this scale, Kauṭilya lists ten further levels of recommended salary scales. Each successive scale is almost half of the immediate higher scale, and the lowest is 60 *paṇas*, which is to be given to the attendants and servants.³⁸

32 Kauṭilya's work has been compared with other political theorists like Aristotle, Plato, and more commonly to Machiavelli of the early sixteenth century, and some scholars also called him the Indian Bismarck. In the early twentieth century, scholars felt the need to place the KA amidst the theories of politics and economics. Kauṭilya's concept of the state was also defined with modern concepts of nation-states. While some saw absolutist tendencies, others found similarities to the social contract theory, state socialism, laissez-faire, and also the welfare state, Dwivedi 2016, 10–12.

33 KA 6. 2. 13.

34 KA 1. 5; 1.9.

35 KA bk. 2, *Adhyakṣapracāra* (Tasks of the Superintendent).

36 KA 1. 1. 6; KA bk. 4.

37 KA 1. 1. 5. Trans. Olivelle 2013, 64. See also KA bk. 6.

38 KA 5. 3. 1–17.

The *KA* lists all possible avenues of revenue and their elaborate definitions. The *samāhartṛ* (Collector/Administrator), for example, is instructed to tap various sources for revenue as follows:

The Collector should oversee the following: fort, province, pit mine, irrigation works, forest, herd, and trade route.

Duties, fines, standardization of weights and measures, city manager, director of the mint, director the passports, liquor, abattoirs, yarn, oil, ghee, sweeteners, goldsmiths, commercial establishment, prostitutes, gambling, building compounds, unions of artisans and craftsmen, temple superintendent, and taxes at the gates are from outsiders – these constitute “fort.”

Agriculture, share, tribute, tax, trader, river warden, ferry, boat, port, pasture, road toll, land survey, and capture of thieves – these constitute “province.”³⁹

The *KA* is also valuable for its particularities on money, as it gives the exact amounts of salaries, wages, taxes, duties, and fines. The minimum fine suggested is that of three *pañas* for verbal insult, which is subject to increase depending on the situation.⁴⁰ The maximum fine mentioned in the text amounts to 1,000 *pañas*, however in cases of cheating, hoarding, and pawning, the fines are to be proportionally increased. An example comes from the section on the ‘Surveillance of Traders’ (*Vaidēhajakṣaṇam*):

For adulterating grain, fat, sugar, salt, perfume, or medicine with substances of similar kind the fine is 12 *Paṇas*.

For someone presenting for sale or pawn as genuine an article that is not of genuine – whether it is made of wood, metal, or gems; or made of rope, leather, or clay; or made of yarn, bark fiber, or hair – the fine is eight times its price.

For someone presenting for sale or pawn an article that is not of high value as one of high value, an article not belonging to a particular class as one belonging to that class, an article containing fake luster, a sham article, or an article whose container is switched, the fine is 54 *Paṇas* if its price is trifling; double that if the price is one *Paṇa*; and 200 *Paṇas* if the price is two *Paṇas*.⁴¹

These are but a few examples of issues of offices, sources of revenue, and examples of uses of money from the *KA* itself. It offers a vast coverage of all matters of statecraft and has been of interest to modern historians, and political and economic theorists since its discovery.

II.2 The *Mānava Dharmaśāstra* or the *Manusmṛti*

The *Mānava Dharmaśāstra* is one of the earliest *dharmaśāstras* and ascribed to the Hindu/Brahmanical tradition in Sanskrit language. The text is dated to the second

³⁹ *KA* 2. 6. 1–3. Trans. Olivelle 2013, 109.

⁴⁰ *KA* 3. 18. 2.

⁴¹ *KA* 4. 2. 17–20. Olivelle 2013, 227. In Kangle’s edition the verses are *KA* 4. 2. 22, 15, 16 respectively, Kangle (1960) 2014a, 132.

and third centuries CE.⁴² Again, it is of an instructional character, laying down prescriptions and prohibitions to be adhered to by society. Its focus, however, is on *dharma*, which subsumes the English concepts of ‘religion,’ ‘duty,’ ‘law,’ ‘right,’ ‘justice,’ ‘practice,’ and ‘principle.’⁴³ It can be described as an encyclopaedic organization of knowledge, as it contains details about diverse areas of human activity, including rituals, food habits, marriage, inheritance, adoption, judicial procedures, taxation, punishment, penance, and so on.⁴⁴ The authorship of the text is ascribed to the legendary king Manu, the progenitor of humanity in every epoch of creation and dissolution in the Indian cosmological tradition.

After the *Manusmṛti* (*MS*), other compositions of *dharmaśāstras* flourished between 300 and 600 CE. The compilation of *śāstras* ended by the seventh or eighth century CE and was replaced by a tradition of expert commentaries (*tīkā*s) and essays pertaining to specific topics of *dharma* (*nibandhas*). It is through these expert traditions that various *dharmaśāstras* were recovered and understood.⁴⁵ Nine commentaries on the *MS* have survived, the earliest being by Bhāruci (ca. seventh century) and Medhātithi (ninth century). Further, *nibandhas* started in the tenth and eleventh centuries CE and explored legal topics such as litigation, property rights, etc., through citations from older *dharmaśāstras*.⁴⁶

The *MS* draws from earlier texts related to aspects of *dharma*. It includes the domestic rituals and duties to be performed by every householder, as was the case in the earlier texts called *dharmasūtras*.⁴⁷ However, *dharmasūtras* were different from *dharmaśāstras* in that they incorporated *vyavahāra*, literally meaning interaction. These interactions include aspects of litigation and jurisprudence in relation to disputes arising from economic and social transactions.⁴⁸ The *MS* recommends

⁴² Olivelle 2005, 25. Other dates also accepted by some scholars for the compilation of the *Manusmṛti* (*MS*) are second century BCE to second century CE (Bühler 1886, cxvii) and second century BCE to fourth century CE (Kane 1968, 330).

⁴³ Doniger and Smith 1991, xviii. To the eyes of the British Company officials and western sanskritists, the *śāstric* texts appeared as a complete code of law along European lines and therefore ready to be implemented in the court as *Hindoo Lawbook* in the nineteenth century. The latest texts in the *śāstra* tradition were in fact compiled as late as the mid-nineteenth century by Hindu Law officers of the High Courts of Bombay, Calcutta, and Madras (Derrett 1973, 6, 9).

⁴⁴ Doniger and Smith 1991, lxi; Olivelle 2005, 66.

⁴⁵ Only three survive in their complete form, those ascribed to Viṣṇu, Yājñavalkya, and Nārada, whereas the *dharmaśāstras* attributed to Bṛhaspati and Kātyāyana were reconstructed from medieval fragments by Rangaswami Aiyangar and P. V. Kane (Olivelle 2005, 66).

⁴⁶ Olivelle 2005, 69–70.

⁴⁷ A *sūtra* (literally ‘thread’) is a verse from which most nonessential elements have been removed. The *sūtra* literature falls within the Vedic Supplementary literature and were composed in aphoristic style of verses. These are considered to be designed as a literature of expert tradition to be transmitted orally. The dates for the *dharmasūtra* texts are cautiously cited as the third to mid-second century BCE (Olivelle 1999, xxiii, xxiv, xxxiv).

⁴⁸ It is suggested that the *vyavahāra* aspect of the texts in the *dharmaśāstras* are derived from the *arthaśāstra* tradition. Trautmann considers this borrowing to be responsible for the end of the

that a legal expert should also consider the specific norms of castes, regions, guilds, and families, and only then settle the dispute based on specificities.⁴⁹ To the reader, individual sections often seem to contradict each other, as a result of changing norms and thoughts over a period of time. Contradictions may also stem from the fact that the *MS* combined different genres (i.e., the *dharma* with the *vyavahāra* tradition), and the written form drew on material from different oral traditions.⁵⁰

The *MS* incorporates within it aspects of litigation (*vyavahārapada*), the king's duty (*rājadharma*), and the duties of an individual (*svadharma*) based on his/her respective social and ritual status. Because it covers the duties and restrictions on every section of society, the intended audience was perhaps larger than that of the *KA*. It has been suggested that the text would have been used in the instruction of young scholars, principally Brāhmaṇas. However, since the medieval commentaries of the text were commissioned mainly under royal patronage, princes may have been another intended audience.⁵¹

As the *rājadharma* (the duty of the king) is one of the topics common between the *KA* and the *MS*, the issues of taxation and its avenues are also referred to in the latter:

The king should levy taxes on traders after taking into consideration the price of purchase and sale, the distance of transport, maintenance and other expenses, and the cost of security.

The king should always assess taxes in his realm after careful consideration so that both he and those who do the work get their fair reward.

As leeches, calves, and bees eat their food a little at a time, so a king should gather annual taxes from his realm a little at a time.

Of livestock and gold, the king shall take a one-fiftieth share; and of grains, an eighth share, or a sixth or twelfth. He shall also take a sixth share of trees, meat, honey, ghee, perfumes, herbs, condiments, flowers, roots, fruits, leaves, vegetables, grass, skins, cane, earthen vessels, and everything made of stone.⁵²

Manu lists seven means of acquiring wealth (*vittāgama*) in accordance with *dharma*: inheritance (*dāya*), finding (*lābha*), purchase (*kṛaya*), conquest (*jaya*), investment (*prayoga*), work (*karmayoga*), and accepting gifts from the virtuous (*satpratigra-*

arthaśāstra tradition as a separate line of work, while the *dharmaśāstras* continued to be compiled even up till the seventh century CE. It seems to suggest a book-killing book scenario, where the *Manusmṛti* overshadowed the readership of the *KA* (Trautmann 2012, 16–17). Olivelle also insists on the possibility that the *Manusmṛti* derived the concepts of *rājadharma* and *vyavahāra* from the *arthaśāstra* tradition. He compared similar passages from both the *KA* and the *MS*, which showed similarities. He also points that it is not possible to understand Manu's vocabulary without reference to the technical terms developed in the *arthaśāstra* tradition (Olivelle 2005, 48–50).

⁴⁹ *MS* 8. 41.

⁵⁰ Doniger and Smith 1991, lvii–lviii.

⁵¹ Olivelle 2005, 66.

⁵² *MS* 7. 127–132. Trans. Olivelle 2005, 161.

ha).⁵³ He also lists ten means of subsistence (*daśa jīvanhetavaḥ*): learning (*vidyā*), craft (*śilpa*), wages and employment (*bhṛti*), service (*sevā*), cattle-herding (*gorak-ṣaṇa*), marketing/trade (*vipaṇi*), agriculture (*kṛṣi*), fortitude (*dhr̥ti*), begging (*bhaik-ṣa*), and usury (*kusīda*).⁵⁴ However, not everyone is advised to pursue all forms of livelihood mentioned above. At various instances, the author suggests restricting certain activities to some sections of society. For example:

A Brahmin or a Kṣatriya must never lend money on interest; to pursue the activities dictated by the Law (*dharma*), however, he may lend to an evil man at a small interest.⁵⁵

The *MS* thus acts as a guide to social conduct and the roles of an individual based on their ritual status, gender, and economic status, forming an interesting source for the study of economic aspects of individuals and social groups.

II.3 The *Kāmasūtra* of Vātsyāyana

Although the subject matter of this text is often taken to be erotic, as a *śāstra* it may be better defined as a guidebook to attaining the demeanor of a refined city dweller, *nāgaraka*, who has mastery over various forms of social interaction. The history of the text is poorly understood. It is traditionally attributed to Mallanāga Vātsyāyana, about whom not much is known. It is also possible that the text is a composite work from northern India, dated between the second and fourth centuries CE.⁵⁶ The *Kāmasūtra* (KS) of Vātsyāyana positions itself with respect to the earlier tradition of works guiding the pursuance of *kāma*. It presents itself as a specialized treaty that appeared after successive abridgement of the grand revelation dealing with the regulation of the *trivarga*.⁵⁷ The KS is available to us through the commentary of Yaśodhara called the *Jayamangala* (ca. thirteenth century), which also makes it possible for us to understand the technical terms and concepts.

The author places the text in the tradition of pursuing *puruṣārthas* (four goals of human life), by paying homage to the first three in the opening section, namely *dharma*, *artha*, and *kāma*.⁵⁸ Vātsyāyana distinguishes human desires (*kāma*) from the natural desire of copulation among animals. Because of this difference, the *śāstra* guides humans on how to acquire proper knowledge and means for success

⁵³ *MS* 10. 115. For further discussion on acquisition of wealth and on notions about livelihood in *śāstras*, see Derrett 1957, 70.

⁵⁴ *MS* 10. 116.

⁵⁵ *MS* 10. 117. Trans. Olivelle 2005, 214.

⁵⁶ Trautmann 1971, 76, 169–171; Roy 1996, 155.

⁵⁷ See KS 1. 1. 4–17.

⁵⁸ KS 1. 1. 1–2.

in social interactions.⁵⁹ The pursuit of *kāma* comprises the satisfaction of sexual, emotional, and artistic life.⁶⁰ An example of this can be seen in the lifestyle of a *nāgaraka*:

He amuses himself by going to festivals, salons, drinking parties, picnics, and group games. On a specific day at half moon or full moon, there is always an assembly of invited guests at the temple of the goddess Saraswati.⁶¹

The KS is about the art of urbane living.⁶² After finishing his education, a man must focus on cultivating his social life: finding a partner, courting, living with or as a courtesan, and maintaining power in marriage. This includes the subject of wealth and how to succeed in commerce:

Power [*artha*], in form of wealth, consists in acquiring knowledge, land, gold, cattle, grain, household goods and furniture, friends, and so forth, and increasing what has been acquired. A man learns about it from ‘The Tasks of Superintendent,’ and from merchants who know about trades and markets.⁶³

The text also represents various social and economic groups. One such group is that of the courtesans. They are identified as participants in the economy. The text also contains recommendations for how a courtesan may become rich and discusses the hierarchy among the courtesans on the basis of their skills, popularity, and wealth. It also serves as a guide for how courtesans should manage a successful and wealthy clientele.

Furthermore, the KS talks about auxiliary skills, called ‘the sixty-four arts,’ which also pertain to women of all social statuses. With training in the sixty-four arts, a *veśyā* (prostitute) may earn a title of *gaṇikā* (courtesan) and get a place in the public assembly. A princess or daughter of a high official will enjoy her husband’s favor over her co-wives.⁶⁴ And a woman may live comfortably on her own when separated from her husband.⁶⁵

The intended readership of the *Kāmasūtra* is generally considered to be urban social elite, as it revolves around their desires, conduct, and aspirations, and learning the sixty-four arts require both leisure and means. The readers could be princes, barons, high state officials, wealthy merchants, or wealthy courtesans. The *nāyaka* (male protagonist/actor) is expected to be prosperous and cultured, and is to learn

⁵⁹ KS 1. 2. 22–24. For a discussion on how Vātsyāyana places the importance on the pursuit of *kāma* in accordance with *dharma*, see Rocher 1985, 522.

⁶⁰ Kane 1968 2.1:8.

⁶¹ KS 1. 4. 14–15. Trans. Doniger and Kakar 2002, 19.

⁶² Doniger 2003, 20.

⁶³ KS 1. 2. 9–10. Trans. Doniger and Kakar 2002, 8. The *Adhyakṣapracāra* (Tasks of Superintendent) is bk. 2 of the KA.

⁶⁴ KS 1. 3. 21.

⁶⁵ KS 1. 3. 20–21, 23. In different edition these verses are 1. 3. 17, 19, 20.

the *KS* along with its ancillary sciences. Material prosperity is emphasized in the text, as poverty is not only considered an obstacle to pleasure, but also to ethics and virtues.⁶⁶

III Narratives: Literary to Visual

The Buddhist narrative tradition forms an important part of the Buddhist scriptural heritage. The two partly overlapping genres of narratives in Buddhist literature are the *jātakas* and *avadānas*. The term *jātaka* literally means ‘related to a birth,’ but in Buddhist tradition *jātakas* refer specifically to the stories of the former births of the Buddha in animal and human forms. The *jātakas* of the *Theravāda* tradition in Pali come from a collection titled the *Jātakatṭhavaṇṇanā* (‘Explanation and Meanings of the *Jātaka*’). It contains 547 of the 550 birth stories of the Buddha.⁶⁷ Although the original meaning of the term *avadānas* (*apadāna* in Pali) is not clear, it may refer to the accounts of deeds and stories of monks and laity.⁶⁸ Along with their themes, both the *avadānas* and the *jātakas* contain elaborate descriptions of city life, market activities, monetary systems, and long-distance travel by land and water routes.⁶⁹

Visual representations on stone reliefs and friezes were also a medium of storytelling in the early Buddhist world.⁷⁰ The visual parallels of the textual narratives start appearing on various *stūpas*, *vihāras*, and *caityas* throughout South Asia from the second century BCE.⁷¹ It is possible that the visual narrative and representation may have found its expression before the written narratives and their canonization.

⁶⁶ Daniélou 1994, 5. This attitude is also common in some plays composed in early centuries of the Common Era. For a discussion, see Kaul 2011, 217.

⁶⁷ The *Jātakatṭhavaṇṇanā* was compiled around 500 CE (Straube 2015, 489). However, it is suggested that the *jātaka* stories may have already been in the oral tradition from the third century BCE onward. The *Jātakatṭhavaṇṇanā* was first edited by V. Fausböll and translated by Rhys Davids, and was published in seven volumes between 1877 and 1897 (Fausböll and Davids 1877–1897). A commonly used translation is available in the six volumes edited by E. B. Cowell with several translators, which were published between 1895 and 1907 (Cowell 1957).

⁶⁸ Straube 2015, 490–492. One of the earliest works similar to the *avadāna* genre is the *Anavatap-tagāthā* found in old Gāndhārī manuscripts dated as early as the first century CE, a part of the Senior Manuscript Collection now in the British Library. Other than these, the Sanskrit texts *avadānas*, namely the *Mahāvastu* and the *Jātakamāla* by Āryasura, are associated with the Gandhāran region. This association is because they were compiled in what is called Buddhist Hybrid Sanskrit, different from Middle Indic Sanskrit (Salomon 1998, 83).

⁶⁹ Numerous *jātakas* refer to voyages undertaken by merchants to Suvarṇabhūmi. See Ray and Mishra 2018, 1–4.

⁷⁰ Dehejia 2007, 285.

⁷¹ *Stūpas* are the mounds, generally hemispherical, built for the veneration of the Buddha and his disciples (Hawkes and Shimada 2009, ix). They are erected to preserve the relics of the Buddha or important monks. The *caityas* are halls dedicated to prayers, and *vihāras* are the abode for monks or nuns.

Both draw from a long oral tradition of transmission. The visual narratives owe their development to donations and the patronage of monks and laity as much as to royal patronage.⁷² The production of visual narratives continued well beyond the third century CE and expanded into other regions of Asia.⁷³

The visual representation of narratives is found on the pillars, steles, and arches of various monuments.⁷⁴ While the Buddhist narrative art seems to be a pan-sub-continental phenomenon between the second century BCE and third century CE, different regions are marked by different artistic attributes, such as mode, narrative, and style.⁷⁵ Examples come from various sites at Gandhāra, Sanchi (Madhya Pradesh), Bharhut (Madhya Pradesh), Amaravati (Andhra Pradesh), Nagarjunakonda (Andhra Pradesh), Kanaganahalli/Sannati (Karnataka), as well as the rock-cut caves in Maharashtra and hundreds of other sites.

The visual narratives are studied for the representation of architecture, fashion, scenes of transportations, transactions, royalty, and worship in contexts of city, village, and forests.⁷⁶ The representations of such stories of the Buddha and Bodhisattvas are quite common in the *stūpa* railings and in rock-cut cave architecture. A famous example is of the story of Anāthapiṇḍaka, a rich merchant.⁷⁷ It concerns the purchase of a garden named Jetavana in the ancient city of Śrāvastī (Shravastī, Uttar Pradesh) by Anāthapiṇḍaka as a gift for the Buddha. This story is visually depicted at Bharhut, Bodhgaya, Sanchi, Kanaganahalli/Sannati, and Amaravati, often with the label: “Anāthapiṇḍaka presents the Jetavana, having bought it for a layer of *crores* [‘10 million’].”⁷⁸ This price is equivalent to the number of coins laid side by side that would cover the whole area.

While the story of Anāthapiṇḍaka is quite commonly represented, there are various depictions of the purchase of Jetavana. One example of this story comes from

⁷² For further discussion on donations and patronage, see below.

⁷³ The visual narrative of birth stories of the Bodhisattvas are also found in Sri Lanka and later in Southeast Asia, Central Asia, and East Asia. See various articles in Agnew 1997; Ray 2007; Skilling 2008.

⁷⁴ Apart from these, there are various other stylistic representations such as foliate patterns on railing or marking the borders of narrative episodes with musicians and dancers, deities (like Lakṣmī, Kubera etc.), mythical and real animals, and auspicious symbols such as *svastika*, *śrīvatsa*, and *pūrṇaghaṭa*.

⁷⁵ For a discussion on different modes of representation, see Dehejia 1990, 374–376. For a discussion on different styles of depictions and influences, see Desai 1985; Taddei 1999; Behrendt 2003, 56–60; Stoneman 2019, 427–460.

⁷⁶ Basant 2012, 193–221. The published report of excavation at the *stūpa* complex at Kanaganahalli (Karnataka) has an interesting illustration of the representations of animals, furniture, ceramics, jewelry etc. (Poonacha 2013).

⁷⁷ The story is included in textual traditions of different Buddhist schools. Furthermore, these also appear in two biographies of the Buddha in Chinese translations (Zin 2010, 369).

⁷⁸ The label is from Bharhut, trans. Dehejia. See Coomaraswamy 1935 pl. 51; 1956 p. 26, fig. 67; Marshall, Foucher, and Majumdar (1940) 1983, 122, pl. 34. a2; Dehejia 2007, 290–297; Zin 2010 fig. 1, 2.

Fig. 1: A medallion on a *stūpa* railing from Bharhut, ca. second century BCE, depicting the purchase of Jetavana with Brāhmī label: *jetavana anādhapiḍiko deti koṭisaṃthatena ketā*. Indian Museum, Kolkata. Photo: Roland and Sabrina Michaud, akg-images.

a medallion on a *stūpa* railing from Bharhut (Madhya Pradesh) (see fig. 1). On the left, it depicts figures standing with their hands together. In the middle, Anāthapiṇḍaka stands under the mango tree with a water jug in his hand facing toward a monument, which perhaps is the aniconic Buddha. Essential to the narrative is the representation of workers covering the ground with square coins and an unyoked bullock cart at the bottom of the medallion. The reproduction of this story again and again through different narrative methods is a good representative of the importance of the social standing of the merchant, also this is an extraordinary case where the materiality of coins, especially punch marked coins, is represented.

IV Tamil Anthology

The *Sangam* or *Caṅkam* is a corpus of literature composed in Tamil in praise of heroic figures, their wars, and love. The *Sangam* literature comprises eight antholo-

gies (*Eṭṭuttukai*) and ten idylls (*Pattupāṭṭu*), making a total of 18 works made up of 2,391 poems.⁷⁹ Its compilation is variably dated between 300 BCE and 300 CE.⁸⁰ Based on a later tradition, the compilation is attributed to the patronage of a collegium of scholars in the early centuries CE under the Pāṇḍya dynasty at their capital (Madurai, Tamil Nadu).⁸¹ Nevertheless, the underlying texts cannot be regarded as court literature. They are more likely bardic in nature and may have been rooted in one or more oral traditions. The recorded authors of various poems are princes, chieftains, peasants, merchants, scholars, monks of different traditions, and so on. The political groups mentioned are the Colas, Pāṇḍyas, and Ceras who controlled the Kaveri valley, the Tamraparni-Vaigai valley, and the western Kaveri region respectively.⁸²

For historians, the concept of *tinai* is a major topic of discussion, and the meaning of the term can only be conjectured. Among the various meanings proposed are concepts as different as 'space,' 'land,' 'abode,' 'genre,' 'genealogy,' and 'situation.'⁸³ One group of scholars understands *tinai*s as ecological zones in the Tamil region. The five major *tinai*s are: the fertile river valleys, called *Marudam*; the littoral areas comprised of the coastal and deltaic areas, called *Neidal*; the hilly region, called *Kurinji*; the dry pasture lands, called *Mullai*; and the arid tract, called *Palai*. If the *tinai*s are understood as ecological zones, each zone has its own range of economic activities, deities, and well defined processes of state formation.⁸⁴

Another view is that the *tinai*s are poetic devices and mythopoeic categories.⁸⁵ There are instances where *tinai*s are associated with seasons and time. The *Mullai* relates to the season of rain and evening, the *Marudam* with the last hours of night and the dawn, the *Palai* as the hot day of midsummer, and the *Neidal* as sunset.⁸⁶ The economic activities and livelihood are not limited to one ecological zone, there are various overlaps. One example is that of rice cultivation near the coasts, and also the reference to how the farmers enjoy their evening at the beach with *tody*

⁷⁹ Manavalan 2014, 43.

⁸⁰ Zvelebil 1973. Another range of proposed dates is first century BCE to fifth century CE (Hart and Heifetz 2002). However, another study by Tieken (2001) has proposed a medieval date for the literature. He proposed that the literature should be considered a ninth- or tenth-century compilation.

⁸¹ The tradition is recorded in a later commentary on *Iraiyanār Kaḷaviyal* by Nakkīra (eighth century CE), Zvelebil 1973, 32–33; Manavalan 2014, 43.

⁸² Chakravarti 2016, 187. For a discussion on polities of the Cola, Pāṇḍyas, and Ceras, see Dwivedi, ch. 3, this volume.

⁸³ Devadevan 2006, 199–218.

⁸⁴ Sastri 1955, 113, 116–117; Champakalakshmi 1996, 28–32; Thapar 2003, 231–233; Gurukkal 1993, 7; Chakravarti 2016, 187–188.

⁸⁵ Devadevan 2006; Selby 2008.

⁸⁶ These are the representations of the *tinai* as poetic themes the *Tolkappiyam* (951–955) (T. R. S. Sharma 2014b). The *Tolkappiyam*, literally 'Ancient Book,' may have been the earliest grammatical works. The earliest version of the text may have been a pre-Common Era composition. However, it took its final form in the fifth century CE (Zvelebil 1973, 131, 137–147).

drinks and fishery. Furthermore, while the *Kurunji* and *Mulai* regions are generally considered an abode for raiders, there are also references to people engaging in production and trans-oceanic trade of pepper.⁸⁷

A certain degree of historical anchoring of the *Sangam* literature can be inferred from a number of port and city names that can either be related to modern cities because of the continuities of their names, or to sites mentioned in the Graeco-Roman *Periplus Maris Erythraei* (*PME*).⁸⁸ Thus we hear of Kāñci identified with modern Kanchipuram, Maturai with modern Madurai, or Kāveripattinam with modern Kaveripattinam. Tonti is probably Tyndis and Muciri is Muziris, as both were recorded as located in the kingdom of a certain Keprubotos.⁸⁹

The main themes of the poems are warfare and glory, but they are interwoven with glimpses into economic practices and ideas of wealth. One instance is of a lovelorn man struggling with the idea of leaving the town to gain wealth:

My heart, if I stay here for love,
wealth will not come to me;
and if I go after wealth
love will not come to me.
It is for you to choose
between staying and leaving.
Like the fish in a stream of unfading flowers
wealth will fleet.
And as for myself,
even if this entire world
were made of bushel to measure with
and seven times such a bushel of wealth
were offered to me,
I will not take it.
I have been struck
by a pair of eyes
moist, streaked, and sweet.
let wealth go now where it will
and fare well!⁹⁰

Some poems have vivid descriptions of nature and agricultural settings. One such description is of the life of a farmer:

In the wide paddy field
with undiminishing yield
the women who reap and gather have cut out the *āmpal* and *neytal* flowers
numerous grown with paddy crop

⁸⁷ Devadevan 2006, 204, 207.

⁸⁸ See von Reden, ch. 10.B, this volume.

⁸⁹ *PME* 53–54.

⁹⁰ *Narriṇai* 16. Trans. T. R. S Sharma 2014a, 94–95.

and spread in them the threshing field
 and got apart the soft red paddy under the feet of fat buffaloes
 and the paddy put on heaps with bushels sticking into them
 look like the nests of stinging wasps.⁹¹

There are many descriptions of activities along the shore, such as merrymaking, fishing, storage, exchange, and gifts:

They [the inhabitants] sell fish and bring on boats heaps of paddy which fill the house. The pepper heaped in the house is put into bags which are thrown in confusion on the noisy beach. The gold brought in the ships are brought ashore in the boats which ply in the backwater. The product of the sea and the mountain are mixed together and are given away to guests. In Muciri which belongs to the Kuṭṭuvan who wears a gold garland and where the roar of the sea is heard, toddy flows like water.⁹²

Similar accounts have been used to illustrate coastal and inland trade and exchange in peninsular India. The *Akanānūru* (148) makes references to *yavanas* (foreigners), whose ships loaded with gold came to Kerala, casting anchor in the river Culli, and returning with loads of pepper. At different instances, they are mentioned as strongly built men who served as palace guards or as merchants who brought lamps of fine workmanship. There are references to them also in the *Mullaippattu*, where they are described as wearing toga-like garments and speaking a different language. Interestingly, they are also mentioned as unlearned youngsters who speak ‘Northern speech’ and are the mahouts of the king’s elephants.⁹³

V Epigraphic Sources

A vast variety of inscribed material has been preserved in the subcontinent. Inscriptions can be found on boulders, pillars, railings of monuments, pottery sherds, metal vessels, and last but not least, on coins (see section below). The scripts of early inscriptions are mainly Brāhmī and Kharoṣṭhī, with exceptions from the northwest where there are a few writings in Greek and Aramaic. The languages are Sanskrit, Prakrit, Tamil, and occasionally Greek and Aramaic in the northwest. Sanskrit inscriptions appear earliest on stone from Ayodhya, Ghosundi, and Hathibada in the first century BCE,⁹⁴ which are later than those in Prakrit and Tamil/proto-Tamil.⁹⁵

⁹¹ *Paṭiṇrupattu* 71. Trans. T. R. S. Sharma 2014a, 140–141.

⁹² *Puranānūru* 343, lines 1–10, trans. Srinivas Iyenger 1929, 298.

⁹³ Zvelebil 1973, 35, 52, 61.

⁹⁴ Salomon 1998.

⁹⁵ Prakrit inscriptions are noted in the Mauryan period (ca. third century BCE). A majority of scholars consider the Aśokan edicts as the earliest examples of writings, while others consider the possibility of a pre-Mauryan origin of writing. For an argument regarding pre-Mauryan origin of writing, see Coningham et al. 1996; Rajan 2015.

Inscriptions have been one of the most trusted sources used for confirming monetary denominations, personal names, the identification of geographic names, and for establishing political chronology.

The beginnings of epigraphic studies of early India date back to the 1830s, when James Prinsep successfully deciphered Kharoṣṭhī and Brāhmī scripts. Since then, ancient inscriptions have been transcribed, translated, and published in various volumes of the *Epigraphia Indica*, the *Annual Report on Indian Epigraphy*, the *South Indian Inscriptions*, the *Corpus Inscriptionum Indicarum*, the *Indian Antiquary*, the *Journal of the Epigraphic Society of India*, and more. Recently, there have been attempts to compile digital catalogs of early inscriptions. Two such examples of digital aids are the web catalogs of the epigraphic evidence from the Gandhāran region (the northwestern regions of India, Pakistan, and parts of Afghanistan) and from the Āndhra region (modern Andhra Pradesh, Odisha, and Karnataka).⁹⁶ Below is a general discussion of the types of early epigraphic sources and their scope as sources for economic history.

V.1 Edicts, Eulogies, and Administrative Records

Royal proclamations inscribed on stone are first attested in the reign of Aśoka (third century BCE) and are of three types: Major Rock Edicts, Minor Rock Edicts, and Pillar Edicts (see map 1).⁹⁷ Most of the inscriptions are in the Prakrit language and Brāhmī script across the subcontinent. Exceptions are found in the northwestern region of the subcontinent, where there are two instances of edicts in Kharoṣṭhī script, two Aramaic edicts, a bilingual Greek and Aramaic edict, and two Prakrit Aramaic edicts.

Above all, these inscriptions have been used to understand events during Aśoka's reign, but they also offer insights into the administrative machinery and reforms, offices, instances of tax exemptions, diplomatic relations with foreign kings, ideological and moral policies, as well as pilgrimage.⁹⁸

An example of the administrative reforms by Aśoka is given in Rock Edict (RE) VI at Erragudi, Andhra Pradesh. The edict proclaims that Aśoka initiated the arrangement by which he was to be informed of affairs of the people at any time of the day, irrespective of where he was.⁹⁹ RE XIII describes Aśoka's conquest of the

⁹⁶ See <https://gandhari.org/> and <http://hisoma.huma-num.fr/exist/apps/EIAD/index2.html>.

⁹⁷ A collection and translation of the Aśōkan inscriptions may be found in Sircar 1979; Thapar 2012.

⁹⁸ A pillar inscription in Rummindei refers to Aśoka's pilgrimage to the birth village of the Buddha in 249 BCE, where he declared tax exemption along with reduction of another tax to 1/8th (Falk 1998, 20). Further, RE VIII and pillar inscriptions at Rummindei and Nigliva refer to his pilgrimage to Buddhist holy places, Sircar 1979, 65.

⁹⁹ The edict lists issues to be reported immediately to the king with no delay. For the translation of RE VI, see Sircar 1979, 18–19.

Map 1: Aśokan edicts (uninscribed pillars not shown), based on Falk 2006. © Peter Palm.

region of Kalinga and his remorse for it, which made him follow the path of *dhamma*, Buddhist teachings.

When he had been consecrated eight years the Beloved of the Gods, the king Piyadassi [Aśoka], conquered Kalinga. A hundred and fifty thousand people were deported, a hundred thousands were killed and many times that number perished. Afterwards, now that Kalinga was annexed, the Beloved of the Gods very earnestly practiced *Dhamma*, desired *Dhamma*, and taught *Dhamma*. On conquering Kalinga the Beloved of the Gods felt remorse, for, when an independent country is conquered, the slaughter, death, and deportation of the people is extremely grievous to the Beloved of the Gods and weighs heavily on his mind ... And moreover the Beloved of the Gods has gained this victory on all his frontiers to a distance of six hundred *yojanas* ...¹⁰⁰

¹⁰⁰ Trans. Thapar 2012, 382–383.

The Sohgaura (bronze plaque) and Mahasthangarh (stone plaque) inscriptions recording proclamations concerning the prevention of famine in situations of emergency also come from the Mauryan period. They contain instructions for the storage of surplus grains and other products in storehouses as a precaution. However, the authorship of the two inscriptions is unknown, and dating is based just on the paleographical grounds.¹⁰¹

A biographical inscription of a post-Mauryan king, Khāravēla, comes from a seminatural cavern called Hathigumpha in Udaigiri. It records valuables sent to him consisting chiefly of horses, elephants, men, and chariots. It also refers to his mastery over various administrative duties including finance (*gaṇanā*) and jurisprudence (*vyavahāra*), as well as his building activities. He repaired water tanks, canals, and various monuments, and oversaw the construction of a royal residence at the cost of 3,800,000 (units undefined). It also mentions the creation of settlement for 100 masons and various privileges bestowed (*anugraha*) worth hundreds of thousands, along with tax exemptions (*parihāra*) granted to his subjects on various occasions.¹⁰²

Similar reports of waterworks, repairs, and dedications of wells are found in other inscriptions. At Girnar, the Junagarh inscription of a Śaka king named Rudradāman (r. 130–150 CE) records the commissioning of repairs of a dam after its destruction during a storm. The same inscription mentions the construction of the same dam by Candragupta Maurya's governor, Puṣyagupta, and its later repair by Aśoka's administrator named *yavanarāja* Tuṣāspa.¹⁰³ Another second-century inscription from Kirari in Chhatisgarh records the commissioning of a water tank in the presence of various officials.¹⁰⁴

V.2 Individual and Personal Records

The northwestern region beyond the Indus has yielded more than 5,000 inscriptions written by private individuals in Brāhmī, Kharoṣṭhī, and Sogdian scripts, with examples also in Bactrian, Tibetan, Chinese, and Hebrew. In addition, there are engraved petroglyphs of *stūpas*, animals, and human figures.¹⁰⁵ The dates of these inscriptions vary. The Kharoṣṭhī inscriptions are dated to the first two centuries CE,

101 Due to the archaic nature of the language and fragmentary remains of the paleography, the detailed interpretation has been controversial (Salomon 1998, 111,140). The possible emergency situations mentioned are caused by water, fire, and devastation of crops by parrots. The items that are to be stored include oil, wood, paddy, and probably some coins of certain denomination (Sircar 1965, 82–83).

102 K. P. Jayaswal and Banerji 1929; Sircar 1965, 206–213.

103 Sircar 1965, 169–174; Thapar 2011, 591.

104 H. Sastri 1925; Basu Majumdar 2017b, 120–121.

105 Jettmar 1989.

while the Brāhmī inscriptions date to 400 CE and much later. They are generally found on boulders and rocks, written alongside or below one another. One example is that of stone no. 18 at Oshibat, a big, isolated boulder covered with more than 125 inscriptions consisting of only personal names.¹⁰⁶ Other instances mention the names of merchants, sometimes monks, and others. Often, they give references to the profession, official title, religious status, and even hometown of the people.¹⁰⁷

In the northwest, these inscriptions have been used to understand regional routes of connectivity and travel. One example is Hunza-Haldeikish, located between Gilgit and the modern Chinese border.¹⁰⁸ This site has more than one hundred inscriptions spread across different passes. The findspots indicate the existence of a dynamic network of capillary routes. These routes perhaps were more important than what are deemed to be major arteries or highways.¹⁰⁹ As eight of the inscriptions are written in Chinese, some scholars consider this region to be the staging post of the ancient Jibin route mentioned in Chinese sources.¹¹⁰

Graffiti and marks on pottery sherds are commonly reported in the South Asian context. Their discovery in sites abroad (as shown above) has important implications for connectivity studies. From Arikamedu, three instances of rouletted ware (RW) sherds with inscriptions in Tamil-Brāhmī and marking the ownership of the wares were reported.¹¹¹ However, among the ceramics carrying Brāhmī script, black and red ware (BRW) and russet-coated BRW dominate at various sites in Tamil Nadu, including Kodumanal, Alagankulam, Uraiyur, Karur, and at Arikamedu in Puducherry. At Kodumanal, which has yielded more than 500 sherds with comprehensible Brāhmī/Tamil-Brāhmī inscriptions, inscribed BRW and russet-coated BRW constitute about 77 percent of the inscriptions. The next most commonly inscribed pottery is RW, constituting about nine percent of the total.¹¹² Most of the marks, graffiti, and inscriptions on pots are post-firing marks, which are associated with the vessel's owner rather than that of the potter. Ownership could be of a personal or corporate nature.¹¹³ Small-scale traders tended to share cargoes, as the risk of loss of a cargo was too great to be incurred by an individual trader. Thus, the items of shared mercantile enterprises needed to be differentiated, and the graffiti or scriptural inscriptions fulfilled that purpose.¹¹⁴ The mercantile involvement in the rise and spread of Brāhmī script is commonly acknowledged, at least in Sri Lanka.¹¹⁵

106 von Hinüber 1989, 43.

107 von Hinüber 1989, 46; Neelis 2000, 912.

108 Neelis 2000.

109 Neelis 2000, 915–916.

110 Yong 1989. The location of Jibin has been controversial in scholarship (Morris, ch. 9, this volume).

111 Begley 1988, 429; A. L. Reddy 2016, 73.

112 Rajan 2015, 270.

113 Deraniyagala 1972, 129; Coningham et al. 1996, 89–90.

114 Coningham et al. 1996, 89–90.

115 Coningham et al. 1996, 92.

Inscriptions by individuals outside the subcontinent give us vivid examples of Indian involvement in maritime activities, especially in the much discussed Indo-Roman trade.¹¹⁶ Six lines of Brāhmī script on an ostrakon was discovered in Quseir al-Quadim (Myos Hormos) on the Red Sea in Egypt.¹¹⁷ It contains names of three merchants and a list of goods (oil, meat, and wine) in Prakrit. The ostrakon, dated to the second or third century CE, presents a case of record keeping in non-Indian style, written in Indian language.¹¹⁸ Another inscription that is used to present a case for long existing connection between India and Egypt is a Greek inscription at a temple in Egypt. It mentions a dedication by Sophon, a resident of Egypt, who claims to be an Indian.¹¹⁹

An interesting corpus of epigraphic evidence was discovered in 2002 on the island of Socotra, 300 km off the coast of Arabia. One Kharoṣṭhī and 192 Brāhmī inscriptions were reported from Ḥoq Cave on the island and are dated between the first and sixth centuries CE. These were found along with various petroglyphs and graffiti.¹²⁰ The inscriptions are mostly devotional in nature, giving names, titles, and sometimes the professions and provenance of the devotees. Some identify themselves as ship captains or ship passengers.¹²¹ Their mix of ethnicities is an interesting feature. Two devotees give their ethnicity as *yavana*, a rather indistinct designation for people who at least originally came from regions west of India and most probably were once regarded as Greek.¹²² In one case, the person's name indicates an Iranian origin. Humiyaka bears a Bactrian name related to Iranian 'Humaiak.' He left two Brāhmī graffiti in the cave. One of these was accompanied with the Graeco-Bactrian spelling, OMOIATO. Strauch suggests that it is possible that this Bactrian originally came from northwestern India where a considerable population of Bactrians is attested, but it cannot be excluded that Humiyaka was an inhabitant of western India. In any case, the bilingual inscription shows that biscriptuality and bilinguality was common at least in some parts of the Iranian population of India. It can be suggested that this capacity considerably facilitated the trade contacts between westerners and Indians, both in India and on Socotra.¹²³

Many Tamil-Brāhmī inscriptions and graffiti on potsherds were found in the Arabian Gulf region, the Red Sea, and southern Arabia. Sherds inscribed with personal names, like *nantaikiran*, have been found during the excavations of Khor Rori

116 Dwivedi, ch. 15, this volume.

117 Salomon 1991, 731–734; for the identification of Myos Hormos, Whitcomb 1996.

118 Salomon 1991, 734.

119 Salomon 1991, 735–736.

120 For a complete survey and analysis of the inscriptions, see Strauch 2012.

121 Strauch 2012, 347.

122 Strauch 2012, 348. In the inscriptions from western and central India, many donors use the terms *yona* and *yavana* to identify themselves (Ray 1988, 314–315).

123 Strauch 2012, 349.

(southern Arabia).¹²⁴ The potsherds derive from utilitarian vessels, including pots, cooking vessels, lamps and lids, dated as early as the third to the first century BCE. They have been identified variably as BRW, RW, and grey ware with similarities to the pottery assemblages found in southern regions of India and in Sri Lanka.¹²⁵

V.3 Donative Inscriptions

As in any other ancient society, *dāna* or gift-giving was of great significance in early Indian society. The question of who should be a donor and who is a worthy recipient was a matter of discussion throughout literary history both in Hindu and Buddhist traditions.¹²⁶ From the first century BCE onward, the term *deyadhamma*, meaning donation for the sake of acquiring merit, appears as an important part of the Buddhist tradition.¹²⁷ In the context of the Hindu tradition, donations of public utility and charity come under the title of *pūrtadharma*, i.e., merit through donation or giving of *pūrta* ('objects'). The ability of all social classes to be able to acquire religious merit through donation is considered the reason for the high frequency of donative records. The records mention the construction and gifting of various objects of public utility, such as wells, tanks, parks, and temple and cave shelters.¹²⁸ The emergence of monuments in various parts of the subcontinent by the beginning of the first century CE was the result of donations by kings, but more frequently by monks and nuns, and even commoners from different economic and social backgrounds.¹²⁹ This social diversity is visible in the thousands of donative inscriptions found on different monuments, indicating sponsorship of different objects or commissioning of art by different people within the same monument. Common donative objects include, but are not limited to: wells, caves, sculptures, vessels, gardens, commissioning of architectural and landscape work such as railings, sculptures, figures, and money for perpetual endowments (*akṣayanivī*).

Records of the donation of caves and rock shelters come from as early as the third century BCE. The most well-known cave shelters are the Barabara and Nagarjuni caves in Bihar; the Jogimara and Sitabenga caves in Chhattisgarh;¹³⁰ the cave shelter complexes of Kanheri, Karle, Junnar, Nasik, and a cave shelter complex of Aurangabad in Maharashtra;¹³¹ and Dambulla and Anuradhapura shelters in Sri

¹²⁴ A. L. Reddy 2016, 73.

¹²⁵ Pavan and Schenk 2012.

¹²⁶ Thapar 1978; Nath 1987; Endo 1987.

¹²⁷ Dehejia 1992, 35.

¹²⁸ Chakravarti 1996, 185. For the concept on *pūrta* vis-à-vis *iṣṭa*, see Kane 1968 2.2:843–914.

¹²⁹ For the prevalence of monks and nuns as donors, see Schopen 2004, 382; Ray 2018, 29–30.

¹³⁰ H. Sastri 1925; Basu Majumdar 2017b.

¹³¹ Senart 1905; Ray 1987; 1994; Brancaccio 2011.

Lanka.¹³² There are references to laypersons from different socio-economic backgrounds, such as merchants, fishermen, nuns, and monks. There are also instances where the merits of the donation are transferable to another person, such as a family member, a guild member, or even the king. An example of this comes from a Buddhist rock-cut cave complex in Nasik (Maharashtra), where a cave with several chambers is donated by a merchant:

Success! This cave, a pious gift of the householder Vira, a merchant, a cell of his wife Nandasiri, and a cell of his daughter Purisadattā; the cave thus completed to four cells has been bequeathed to the universal *Samgha* [Buddhist religious community].¹³³

The Mirjapur stele inscription near Mathura records a donation by a female treasurer. The inscription identifies the donor as Kauṣiki Pākṣakā, mother of Vasu and wife of Mūlavasu, as treasurer for *satrap* Śoḍāsa (ca. 10–25 CE). The gift is listed as twin water tanks, a garden, an assembly hall, a well, a pillar, and stone slabs with the image of goddess Śrī.¹³⁴

One of the most interesting types of donation is the *akṣayanīvi* (literally ‘perpetual endowment’ or ‘inexhaustible investment’).¹³⁵ These are donations of capital money – money to be invested – from which the interest (*vrddhi*) is to be used for very specific purposes. It is not the capital itself that is to be enjoyed by the recipient, but just the recurring interest. There are references to these kinds of donations from Mathura, Kanheri, Nasik, and later from sites in Andhra Pradesh.¹³⁶ One such donative inscription is of Uṣavadatta from Nasik:

Success! In the year 42, in the month of Vesākha, Uṣavadāta, son of Dinika, son-in-law of king Nahapāna, the Kshaharāta Kshatrapa, has bestowed this cave on the *Samgha* generally, he has also given a perpetual endowment, three thousand – 3000 – *kāhāpaṇas*, which, for the members of the *Samgha* of any sect and any origin dwelling in this cave, will serve as cloth money and money for outside life (*kuśaṇa*); and those *kāhāpaṇas* have been invested in guilds dwelling at Govadhana, – 2000 in a weaver’s guild, interest one *pratika* (monthly) for the hundred, (and) 1000 in another weaver’s guild, interest three quarters of a *paḍika* (monthly) for the hundred; and those *kāhāpaṇas* are not to be repaid, their interest only to be enjoyed. Out of them the two thousand – 2000 – at one *pratika* per cent. Are the cloth money; out of them to everyone of the twenty monks who keep the *vassa* in my cave, a cloth money of twelve (*kāhāpaṇas*). As to the thousand which has been invested at an interest of three quarters of a *pratika* per cent, out of them the money for *kuśaṇa*. And at the village of Chikhalapadra in the Kāpura district have been given eight thousand – 8000 – stems of coconut trees; and all this has been proclaimed (and) registered at the town’s hall, at the record office, according to the custom ...¹³⁷

¹³² Bandaranayake 1997; Coningham 2006, 453.

¹³³ Senart 1905, 75.

¹³⁴ R. C. Sharma 1989, 308–310; Quintanilla 2007, 259; Falk 2009, 23.

¹³⁵ For such endowments in the medieval period, see Borgolte 2014, 70–83.

¹³⁶ Senart 1905; Sircar 1965, 146, 157–162; Ray 1987, 1994; P. K. M. Reddy 1998, 302; Singh 2004a, 394; Falk 2008.

¹³⁷ Senart 1905, 82–83.

Inscriptions on vessels are also found in religious contexts. Examples include a number of Kharoṣṭhī inscriptions found on donative vessels from Peshawar¹³⁸ and Kashmir Smast,¹³⁹ and those with Brāhmī script from Jetavana Monastery at Anuradhapura.¹⁴⁰

VI Archaeological and Architectural Remains

This section will discuss megalithic remains, ceramics, and shipwrecks from different contexts, with a focus on two issues: how the context and approaches to their study have influenced the understanding of subsistence pattern of people and how the studies have implications on the understanding of regional and long-distance connectivity of South Asia.

Archaeology in the context of South Asia started in the nineteenth century with European antiquarian curiosity about the apsidal Buddhist monuments, called *stūpas*. Archaeological remains of early India were considered representatives of the Buddhist culture, and the architecture, sculpture, coins, and inscriptions became associated with Buddhism.¹⁴¹ Text-based archaeology has been an inherent feature of Indian archaeology, where the main aim of archaeologists has been to locate the cities mentioned in various literary sources.¹⁴² Another characteristic aspect has been the search for urban centers, identified through various criteria that have changed with developments in scholarship.¹⁴³ In recent understanding, an early historic urban space is marked by a differentiated and heterogeneous population; dynamic public, private, and religious spaces with varied economic, social, and ritual functions; and access to nonlocal goods suggesting long-distance connectivity.¹⁴⁴

In one study of early historic cities, 63 sites exhibited strong urban tendencies. These urban settlements ranged from 50 to 300 ha.¹⁴⁵ The largest ones were Chandraketugarh, Kaushambi, Mahasthangarh, Mathura, Paithan, Pataliputra, Shishup-

138 Chhabra 1949–1950, 125.

139 Falk 2008.

140 Ratnayake 1984, 36–44.

141 For the beginning archaeology in India and discussion on the development of scholarship, see Dwivedi, ch. 15, this volume. See also Chakrabarti 1988; 1997; Singh 2004b; Guha-Thakurta 2004; Fogelin 2015; Ray 2018.

142 Chakrabarti 1995, 187–194; J. Menon 2008, 20. The most recent instance of text-based archaeology is the excavation at Pattanam. The site has been identified as the legendary Muziris, even when many scholars question this attribution (Selvakumar 2006; Mathew 2017b).

143 Chattopadhyaya 2003b, 66–68; M. L. Smith 2006.

144 N. Lahiri 1992, 268–323; Morrison 1997, 88; Chattopadhyaya 2003b, 66–68; M. L. Smith 2006, 130; Chakravarti 2009, 139–140.

145 M. L. Smith 2006, 116–119.

algarh, Ter, and Ujjain.¹⁴⁶ Recent approaches also identify cities, the process of urbanization, and also the location of the urban, vis-à-vis the rural hinterland. The study of satellite regions and neighboring settlements has demonstrated the great complexity of the landscapes. Often, early historic cities are clusters of closely knit settlements in a limited area. A survey of Kanpur district in Uttar Pradesh showed a cluster of 150 sites, 141 of which experienced an early historic phase.¹⁴⁷ Mathura has also been identified as a ‘settlement locality’ with a series of sites in a micro-region.¹⁴⁸ The region of Varanasi also has many related archaeological sites, namely Rajghat, Kotwa, Aktha, and Sarnath.¹⁴⁹ Similarly, various other complex sites with well-connected clusters of sites are reported from South Asia. The list includes, but is not limited to, Sanchi, Anuradhapura, Tirunelveli, and Tungabhadra valley.¹⁵⁰

VI.1 Assemblages of Megaliths

More than 3,000 megalithic sites have been documented since they were first identified and named in the 1820s.¹⁵¹ Megaliths are mainly Iron Age structures that continued from ca. the first millennium BCE into the early historical phase of the Deccan, the southern peninsula, and Sri Lanka.¹⁵² These structures do not conform to the literal meaning of a megalith, which usually means ‘built of large stone,’ but got their name from European analogies.¹⁵³ These are also referred to by their regional names, such as *pandukal*, *pandu coolies*, *kodaikal*, *topikal*, etc.¹⁵⁴

A variety of stone structures constitute the megalithic culture of South Asia. They range from simple erect stones called menhirs to complex arrangements of stone blocks formed into a chambers, cairn circles, and even subterranean porthole cists built of stone slabs. These are generally associated with mortuary practices

¹⁴⁶ M. L. Smith 2006, 100.

¹⁴⁷ Lal 1984, 145–153, 257–259.

¹⁴⁸ Chattopadhyaya 2003b, 68; Härtel 1993.

¹⁴⁹ V. Jayaswal 2009, 5.

¹⁵⁰ Rea 1904a; Coningham 1995; 1999; Shaw and Sutcliffe 2003; Singh 1996; Basant 2012; Bauer 2015.

¹⁵¹ Babington 1823; S. M. Menon 2018.

¹⁵² In South India, the late Iron Age is also associated with the *Sangam* period, not only based on the archaeological assemblage, but also textual references to burial practices. A reference to urn burial is found even in the *Maṇimekhalai*, an epic from later *Sangam* period, where a widow requests the potter make an urn large enough to include her too. Leshnik 1974, 18–19; Ramanna 1983, 25.

¹⁵³ Leshnik 1974, 1; S. M. Menon 2018, 210.

¹⁵⁴ *Pandukal* refers to *paṇṭu+kal*, which in Tamil means old + stones i.e., old graves. Another tradition also associates them with the Pāṇḍava brothers of the *Mahābhārata*, who are said to have taken abode in these stone and rock shelters during their exile (Leshnik 1974, 2–3). The *kudaikal* and *topikal* were names given to the different varieties of megalithic structures meaning umbrella stone and cap stone respectively (Sudyka 2010, 380).

and rituals, and they may or may not be associated with burial remains. Some burial sites associated with megalithic remains have also yielded human remains, which have been used to study the food habits of inhabitants during the Iron Age.¹⁵⁵

Megalithic sites have yielded many artifacts, pottery, metal implements, and grain samples. These remains have been studied to understand the nature of the sites, the connectivity of the site with neighboring and distant areas, as well as the complexity of human interaction with the landscape and bodies of water.¹⁵⁶ The study of burial pits at the megalithic site in the village of Porunthal (Dindigul, Tamil Nadu) has produced domesticated paddy and millet samples, revealing cereal processing activities and grazing in association with complex burial rituals, which have been found as early as the sixth century BCE.¹⁵⁷ A transept cist with paddy remains was found along with potsherds inscribed in Tamil-Brāhmī with a radiocarbon date of 490 BCE.¹⁵⁸ This evidence cast doubt on the old myth about the pastoral nature of the people associated with megalithic burials in South Asia.¹⁵⁹

There is also evidence for iron production in megalithic sites. In Tamil Nadu, the sites yielding iron ore are Tirunelveli, Madurai, Pudukottai, Coimbatore, and Tiruchirappalli. These regions chiefly contain the magnetite (Fe_3O_4) and laterite (Fe_2O_3) types of iron ores and the sites display traditional preindustrial methods of iron extraction and smelting. Kodumanal's megalithic site produced evidence for ferrous crucible processing.¹⁶⁰ In Sri Lanka, excavations have revealed large-scale iron extraction operations from the third century BCE onward.¹⁶¹

VI.2 Pottery, Graffito, and Script

The history of ceramic studies may be divided into three phases: the study of whole pots from an art historical perspective; the study and analysis of sherds to understand typology both chronologically and spatially; and after 1960, a more holistic contextual approach of the finds.¹⁶² In recent times, pottery studies have branched

155 Rea 1904a; 1904b. Leshnik 1974, 21–22 on early (sixth century BCE) skeletal finds.

156 Coningham 1995; Bauer 2015.

157 Premathilake et al. 2017.

158 Rajan 2015, 404; Premathilake et al. 2017, 498–499.

159 For recent studies regarding the socio-cultural and political complexities of the megalithic burials, see Coningham 1995; Shaw and Sutcliffe 2003; Bauer 2015.

160 Chakrabarti 1992, 19, 150–151; Srinivasan and Ranganathan 2004, 24–25, 36.

161 Juleff 1998, 3–4.

162 Ray and Achyuthan 2010, 128. Typological study of potteries for their use as chronological markers had been common in Indian history. For instance, the painted grey ware (PGW) were associated with pre-Mauryan chronology, the northern black polished ware (NBPW) commonly gets associated with the Mauryan rule, the pottery found in levels dating from the second century BCE to the third century CE is generally categorized as Śunga-Kuṣāṇa, and the black and red ware (BRW) got associated with megaliths.

out to include ethnographic studies, studies on manufacturing technology, the dating of archaeological assemblages, and analyzing the functions of ceramics.¹⁶³ The studies regarding the functions of pottery have been used to understand the economic and social contexts of their use.¹⁶⁴

Ceramics have been important mostly as a source to determine long-distance trade and interaction in Indian history. The following discussion of studies of rouletted ware (RW) and amphorae shows how the evolution of ceramic studies has altered the course of the discourse on trade. Their finds were long associated with the maritime activities of the Romans in India, and the find sites in south India and Sri Lanka were labeled as Roman trading stations.¹⁶⁵ More than 120 sites from India and Sri Lanka have reported finds of RW.¹⁶⁶

In 1945 after the excavation of Arikamedu, a distinctive type of decorated grey ware found at the site was named RW.¹⁶⁷ The method of decoration appeared similar to the rouletting found in Mediterranean ceramics.¹⁶⁸ Since the site also contained Mediterranean amphorae and some *terra sigillata*, the RW was associated with the pottery from the classical world. It was suggested that the finer RW were imported ceramics, and those of softer fabric and coarser rouletting may have been local imitations.¹⁶⁹ Thus, RW became the identifier of port sites as Roman trading stations. It also became the most important ceramic type for determining the inland trade patterns in the subcontinent, suggesting connections between the eastern coast of India, the northwestern coast of Sri Lanka, and the international routes. This idea only recently fell out of favor. RW as an imported pottery came to be systematically questioned from the 1980s onward based on the difference of the RW from the wares in the west in terms of shape, fabric, surface, color, and scheme of decoration.¹⁷⁰ Later, the study of RW from Satanikota, Andhra Pradesh (excavated in 1977–80) exhibited a mineral content identical to that of the local black and red ware (BRW) suggesting local production of both. Further studies also concluded that even the RW from different sites were not typologically similar, suggesting varied types within the subcontinent and multiple centers of production.¹⁷¹

Further studies from Anuradhapura (Sri Lanka) have suggested that RW falls in the larger grey ware tradition of South Asia dating to 500 BCE–200 CE. Comparative

163 Ray and Achyuthan 2010, 128, 130.

164 Here the reference is to the ceramics and urn for burial rituals (Leshnik 1974, 21–22; Coningham, Knusel, and Mann 2006, 623) and ceramics associated purely with the monasteries and monks (Coningham et al. 2006, 277). Also see Krishnan and Balvally 2017.

165 For study of potteries as a determinant of Roman trade connections, see Wheeler, Ghosh, and Deva 1946.

166 Rajan 2015, 19–23.

167 Wheeler, Ghosh, and Deva 1946; Wheeler 1954.

168 See Weaverdyck, ch. 8.A, this volume for Mediterranean pottery.

169 Wheeler 1954, 149; Wheeler 1976, 48; cf. Begley 1988, 427.

170 Begley 1988, 1992.

171 Begley 1988, 428.

analysis of the chemical composition of three related potteries (RW, Arikamedu Type 10, and grey ware) from different sites showed significant similarities over time.¹⁷² As the grey ware predates Mediterranean contact, the common origin of all three must have been indigenous. The study suggested closely related geographical sources for RW and other grey ware, along with consistency in the fabric over a long period of time (500 BCE–200 CE) even among those traded to Berenike (Egyptian coast) to the west and Bali (Indonesian coast) to the east.¹⁷³

As recent studies have disturbed the notions of RW as an imported ware, the Mediterranean origins of other potteries have also been reevaluated. For example, the moldware pottery from the western Deccan is stylistically similar to Hellenistic moldware pottery (Magarian ceramics) and numerous western metal forerunners. However, it has been suggested that the Deccan moldware could date as early as the third century BCE, and that both Deccan and western styles could have been derived from Achaemenid prototypes.¹⁷⁴ In addition, the reclassification of many ‘amphorae’ as torpedo jars of Mesopotamian design, and sometimes from the Sasanian period, further questioned the dominance of Rome over maritime activity in the Indian Ocean.¹⁷⁵

Recent ceramic studies from the Pattanam excavation in Kerala have further confirmed the dominance of local pottery at port sites. These results are even more important for understanding Indo-Roman trade, as Pattanam is considered the legendary port of Muziris known from the *PME* and the famous Muziris papyrus recording the value of a cargo from Muziris to Koptos in Egypt.¹⁷⁶ After seven seasons of excavation at Pattanam (2007–2013), the ceramic study has shown that local pottery accounted for about 99 percent of the pottery finds at the site.¹⁷⁷ The detailed chemical and typological studies of early historical ceramics have challenged the long-standing approach to long-distance trade, suggesting alternative connections and networks developing before the first century CE and the importance of local trade.¹⁷⁸

Pottery has also been used to illuminate socio-economic practices. The changes in the nature of the earthenware may indicate changes in the social composition of a site over time. In Sri Lanka, a particular flat bowl type of tableware is associated with Buddhist alms bowls and is found in satellite monasteries, but absent in the city cores. At Anuradhapura, this type constitutes 50 percent of the ceramics in 500–300 BCE, declines to 39 percent by the third century CE, and continues to decline to two percent in the medieval period. Such changes are indicative of social, economic, and culinary changes.¹⁷⁹

¹⁷² Ford et al. 2005, 911.

¹⁷³ Ford et al. 2005, 918.

¹⁷⁴ Begley 1992.

¹⁷⁵ Tomber 2007, 2008.

¹⁷⁶ Rathbone 2001. See also von Reden, ch. 8.C, this volume.

¹⁷⁷ Cherian 2011.

¹⁷⁸ Pavan and Schenk 2012; Schenk 2015.

¹⁷⁹ Coningham et al. 2006.

VI.3 Underwater Archaeology: Ports and Shipwreck Sites

Underwater archaeology is one of the most recent developments in the field of South Asian archaeological studies. After the UNESCO Convention on the Protection of Underwater Cultural Heritage (2001), South Asian countries started systematic exploration of maritime spaces and underwater heritage through various international collaborations.

In India, the origins of systematic marine archaeology go back to the foundation of the National Institute of Oceanography in 1981. Since then, government and private collaborations have extended support to offshore marine exploration, which have been carried out in Dwarka, Bet Dwarka, Somnath, Vidyadurg, Malwan, Goa, Lakshadweep Islands, Poompuhar, and Mahabalipuram.¹⁸⁰ The underwater excavation at Dwarka and the nearby island Bet Dwarka have shown evidence of an ancient harbor. Scholars have identified it as Baraca/Barake of the *PME*.¹⁸¹ Offshore of Bet Dwarka, a concentration of artifacts at the depths of 5–8 m has been identified as a shipwreck. The site is situated at the mouth of the Gulf of Kachchh where the tidal currents are severe, removing lighter material and preventing organic material from being preserved under sedimentation. This wreck site has yielded amphora sherds, anchors, and a lead ingot, but no timber from the ship itself.¹⁸²

The recently explored shipwreck near Godavaya/Godawaya (southern Sri Lanka) is the first to reveal a variety of well-preserved materials. Carbon 14 analysis of the wood dates the shipwreck to between the second century BCE and first century CE,¹⁸³ making it the oldest shipwreck in the Indian Ocean, possibly predating the Roman engagement in Indian Ocean trade.¹⁸⁴ Godavaya, situated at the mouth of the river Walawe Ganga, has a strategic position as a port site with access to the hinterland via riverine routes. Moreover, a second-century CE inscription found in the Godavaya temple records the donation of custom duties collected at the port of Godavaya Pattana. The inscription refers to the donation of the custom duties of the port to the *vihāra* (monastic residence) by King Hamani Abaya.¹⁸⁵

The shipwreck was first noticed in 1998 during the excavation of the port site at Godavaya. Since then, samples of BRW, quern-like stone objects, two purified glass ingots, and an unidentified copper object were brought to the surface. The ceramics reported include several complete vessels, both large and medium storage jars and a carinated (keeled) cooking vessel, and fragments have also been identified as cooking vessels, plates, and bowls. They are similar to the peninsular and Sri Lankan megalithic BRW. The stone objects discovered could have been four-

180 Tripati et al. 2003; Tripati, Gaur, and Sundaresh 2004.

181 *PME* 40; Gaur, Sundaresh, and Tripati 2004; 2006.

182 Gaur, Sundaresh, and Tripati 2006, 125.

183 Gaur et al. 2011; Muthucumarana et al. 2014; Bopearachchi, Disanayaka, and Perera 2016.

184 Bopearachchi, Disanayaka, and Perera 2016, 416.

185 Muthucumarana et al. 2014, 43.

legged querns or small stone benches with possible ritual importance. Similar objects were reported from many places in mainland India and from Sri Lanka.¹⁸⁶ These objects also carry the engraved symbols of *śrīvatsa* (literally the ‘beloved of Śrī’), *nandipada* (taurine), and *mīna* (fish), which are very common in the iconography of early South Asia and are found in various Hindu, Buddhist, and Jain contexts on *stūpa* railings and coins.¹⁸⁷ Artifacts from this shipwreck are indicators of regional connectivity and transport. Further excavations are expected to throw more light on shipbuilding and navigation technology.¹⁸⁸

VII Numismatic Sources

This section is divided into three parts. The first section examines the development of numismatic studies in India. The second section focuses on some salient features of early historic coinage. And ends with a discussion on the importance of the contextual study of the coins, especially those coins found in areas outside their original circulation zone.

VII.1 Numismatics

The earliest numismatic studies are dated back to the early nineteenth century as a result of the antiquarian interests of the East India Company officials.¹⁸⁹ One of the earliest attempts of categorizing and cataloguing the collections of early coins was by Alexander Cunningham in 1891. Within the next three decades, museums published five more catalogs of coins.¹⁹⁰ In 1936, another catalog of pre-Gupta (pre-fourth century CE) coins was compiled by John Allan, which is a comprehensive study of the symbols and legends on the coins of the British Museum collection.¹⁹¹ Even though these catalogs were published a long time ago, and many attributions have been questioned and revised, they are still foundational works.¹⁹² More recent

186 Muthucumarana et al. 2014, 54.

187 Allan 1936; S. Sharma 1990; Handa 2007.

188 Bopearachchi, Disanayaka, and Perera 2016, 411–412, 426.

189 For the brief survey of the development of numismatics in India, see Dwivedi 2015.

190 Dwivedi 2015, 218–219.

191 Allan 1936.

192 Some of the most prominent journals specifically dedicated to numismatic studies are, *Numismatic Supplements to the Journal of Asiatic Society of Bengal* (Calcutta), *Journal of Numismatic Society of India* (Varanasi), *Numismatic Digest* (Bombay, and later Nasik), *Numismatic Chronicle* (London), *Indian Numismatic Chronicle* (Patna), *Oriental Numismatic Studies* (Delhi), *Studies in South Indian Coins* (Madras/Chennai), *Journal of the Academy of Indian Numismatics and Sigillography* (Indore) and *Numismatic Studies* (Delhi).

corpora include *The coinage and history of southern India* (2 vols.),¹⁹³ *Tribal coins of ancient India*,¹⁹⁴ *Ancient trade and early coinage* (2 vols.),¹⁹⁵ *Studies in the coinage of the Western Ksatrapas*,¹⁹⁶ and *Coins and tokens from ancient Ceylon*.¹⁹⁷

The variety and complexity of the Indian monetary systems are challenging. While the number of coins in the monetary system must have been huge, the denominational structure and size of coin issues, let alone the volume of coins in circulation, is not yet understood.¹⁹⁸ The absence of coin dies is another challenge in studying Indian monetary systems, as the identification of mint sites is mere speculation.¹⁹⁹

The role of numismatics in mainstream ancient history thus remains marginal. The primary function of coins in archaeological contexts has been that of dating the archaeological layers or contexts in which they were found. But even this is possible only when the coins are recognizable. If corroded, base metal coins found in excavations often go unnoticed and are not recorded in excavation reports.²⁰⁰ Few excavation teams in India have trained numismatists among their members. As a result, lesser known coins remain unidentified and unknown.²⁰¹ For example, the excavations at Rairh and Sanghol that have yielded large numbers of coins were not systematically reported, and thus have not been studied. Often, coins that come out of excavation are left uncleaned and end up in the artifact collection units of the excavation departments or other institutions involved in the excavation.²⁰²

VII.2 Indic Coins

The first coined money in the subcontinent, dated to the sixth and fifth centuries BCE, were the bent bar coins from the northwest region and the punch marked coins

193 Mitchiner 1998a.

194 Handa 2007.

195 Mitchiner 2004.

196 Jha and Rajgor 1994.

197 Walburg 2008.

198 However, for attempts at quantification, see R. S. Sharma 1968; Shrimali 1985, 86–87. For a discussion on the difficulty of any form of meaningful quantitative analysis in Indian history, see Chattopadhyaya 2003a, 218.

199 A. M. Shastri 1991. A punch mark die and a Roman coin die have been found from Karur, Tamil Nadu (Radhakrishnan 1994; Krishnamurthy 1996). Based on this find, many scholars have concluded that this could be a minting site, not only for the punch marked coins, but also of the Roman coins found in the subcontinent (Mitchiner 1998b, 72–77; Basu Majumdar 2017a, 405–406).

200 A. N. Lahiri 1990; Gupta 1987.

201 A. N. Lahiri 1990, 213.

202 The coins that came from the Rairh excavation were kept in trunks and gunny bags, and have not been made available for studies. A similar case is the coins excavated from Sanghol that are kept in the Rang Mahal Museum of Punjab, Punjab State Department of Archaeology. There are fewer attempts made to clean and catalog these coins, nor are they being scientifically preserved.

Fig. 2: An example of a silver PMC, Odisha, ca. sixth to third century BCE (not to scale). ANS 1972.30.10. © American Numismatic Society.

(PMC) with a wider circulations (fig. 2).²⁰³ Early coins were produced by three methods: punch marking, casting, and die striking. The die striking method appeared later than punch marking and casting. In punch marking, every symbol is punched separately, while in die striking all the symbols are carved on a single die and are struck on to the coin at once.²⁰⁴ Casting required molten metal to be poured into a cavity formed by joining two molds together.²⁰⁵

Extensive use of symbols and devices on coins is a common characteristic of Indian coinage tradition (fig. 3).²⁰⁶ Many symbols signify *mangala* (i.e., benediction and auspiciousness), which are also found on pottery, sculpture, and inscriptions.²⁰⁷ The function of these symbols has been much discussed. Some suggest that their purpose was to legitimize the coin issue, as some devices served as heraldic emblems.²⁰⁸ Others have suggested that they had some function in benediction,²⁰⁹ or were a succinct means of communication, as symbols can convey much within a very small space.²¹⁰

Coins with legends, called inscribed in contrast to uninscribed, first appear in the second century BCE. The introduction of writing on coins was probably influenced by contemporary Western coins.²¹¹ From the second century BCE onward, a large number of coin issuing groups appeared in northern India. Their issues, known as tribal coins, circulated along with the Indo-Greek, Indo-Parthian, and Kuṣāṇa coins with overlaps in areas of circulation.

²⁰³ Cribb 2005; Morris, ch. 9, this volume.

²⁰⁴ Srivastava 2008.

²⁰⁵ Prakash and Singh 1968, 90–91.

²⁰⁶ Allan 1936; Mitchiner 1973; Cribb 2005. Fig. 3 is a biscriptural coin of Kuṇindas, attributed to Amoghahūti (Handa 2007, 58–60). This coin is a good representative of extensive use of symbols and devices on Indic coins.

²⁰⁷ Many of these symbols date back to the Bronze Age (S. Sharma 1990; Cribb 2005, 16).

²⁰⁸ A. K. Jha 1991, viii.

²⁰⁹ Sarkar and Pande 1999, 2–3.

²¹⁰ Y. Shastri 1999.

²¹¹ A. N. Lahiri 1964; Cribb 2005, 8.

Fig. 3: Silver *drachm* of Amoghabhūti (Kuṇinda), 150–100 BCE (not to scale).
ANS 1944.100.51664. © American Numismatic Society.

The coins of the Indo-Greeks, Indo-Parthians, and Kuṣāṇa regularly bore the names of rulers and certain deities.²¹² In contrast, the inscribed coins of indigenous issues had four types of inscription: (i) names of specific cities;²¹³ (ii) guild names, *naigama* or *negamā*, *gadhikānam*;²¹⁴ (iii) the name of a king, chief, or deity;²¹⁵ and (iv) references to *janasya*, *gaṇasya*, or *janapada*, tying it to republican or clan-based society.²¹⁶

Some coins reveal connections between different groups and regions. The north-western coins of the Kuṇindas, Auḍumbaras, and Ārjunāyanas contain both Brāhmī and Kharoṣṭhī scripts.²¹⁷ In the Deccan, the Sātavāhanas also issued bilingual coins in Tamil and Prakrit, suggesting connections to the north as well as the south.²¹⁸ The coin design of the Sātavāhanas, which featured a royal portrait on one side and a divine image on the other, is considered the result of Hellenistic influence. Some Sātavāhana also bear counter-strikes, which have been used to establish the relative chronology of the Kṣatrapa and Sātavāhana rulers in the first century CE.²¹⁹ It is often believed that counter-striking was an indication of political rivalry, showing contestation of and superiority over the other ruler. But it could also have been an efficient means of continuing monetary supply when political authority changed legitimately. Counter-striking is a swift method of announcing political change to the money user without the need of melting down, refining, and refabricating the coins. This, however, has been more specifically found to be the case in the Kṣatrapa and Sātavāhana coins, where Nahāpana overstruck the Sātavāhana coins. Later, his coin issues were further overstruck by Gautamīputra Śātkaṇi (fig. 4).²²⁰

²¹² See Morris, ch. 9, this volume.

²¹³ Allan 1936.

²¹⁴ Bajpai 1976, 50, 52–53.

²¹⁵ Shrimali 1985; Handa 2007; Bhandare 2016.

²¹⁶ Allan 1936; Sharan 1972; Y. Shastri 1999; Handa 2007.

²¹⁷ Allan 1936; Handa 2007.

²¹⁸ Panneerselvam 1969; Thapar 2011, 583.

²¹⁹ Cribb 2000, 43–46; Bhandare 2011.

²²⁰ Bhandare 1999, 39, 74–76, 134–136.

Fig. 4: Counter-struck silver *drachm* of Nahāpana/Gautamīputra, Girinagara, 119–126 CE (not to scale). ANS 1944.100.55902. © American Numismatic Society.

The functionality of the monetary system in the early Indian context is based on the concept of continuity of coin design and not dependent on the issuing authority.²²¹ As a result, various coins circulated long after the decline of the dynasties that issued them. There was probably also no royal monopoly on the issuing of coins. It has been argued that when dynastic authorities were not in a position to issue their own coins, local goldsmiths minted imitations in order to meet monetary demand.²²² The longevity of circulation of a coin type and the issuance of similar coins is explained by local conservatism and a long monetary tradition.²²³ For example, the PMC circulated until well into the early medieval period. Some types of Mālavas, Sātavāhana, Kṣatrapas, and Kuṣāṇa coins circulated until the fourth and fifth centuries CE in crude imitation forms.²²⁴

VII.3 Contexts of Coin Finds: Money, Treasure, and Ritual Objects

Coins have been found as surface finds, in excavations, and in hoards. The discovery of coins in foreign contexts has various implications. However, their use as valid media of exchange is limited to a specific region. This regiospecificity is an inherent consequence of the monetary functions of coins.²²⁵ In the Indian subcontinent, however, coins are found in large numbers outside their regiospecific contexts, especially in the southern peninsula and Sri Lanka. Examples are Roman gold coins found in peninsular India and Sri Lanka, and the early north Indian inscribed and uninscribed coins found in Sri Lanka in large numbers. Given their large numbers, can

²²¹ Cribb 2005, 14–16.

²²² Sircar 1965, 207.

²²³ Sircar 1968, 206–208; Cribb 2005, 14–16.

²²⁴ Sircar 1968, 206–207; A. M. Shastri 1992, 292; Gokhale 2004, 109. An indicative if this tradition is also found in the *PME*. The *PME* (47, 9) mentions old *drachms* of the Indo-Greek kings Apollodotos and Menander (second century BCE) still in use at Barygaza in the first century CE.

²²⁵ Bhandare defines regiospecificity as “a numismatic phenomenon in which, for a given issuing authority, the type/types of the coins it issues are peculiar to a particular geographic area” (Bhandare 2006, 83–84).

these be called coins in their foreign contexts? Did they have a monetary role as currency or as bullion? Or did they also fill extra-economic roles in the society?²²⁶

PMCs are often understood as all-purpose money. Based on the existence of silver-plated imitations of the northern issues, it is evident that the northern PMCs influenced Sri Lankan ones. Like genuine PMCs, these may have circulated alongside locally produced ingots, suggesting that both had monetary functions. The monetary role of the PMCs in Sri Lanka is also attested in inscriptions and texts by the regular use of the terms *kahāpana* (Pali) and *kahāvaṇa* (Sinhalese).²²⁷ *Kahāpana* (Skt. *kārṣāpaṇa*) is a commonly used term in India that connotes a quantifiable monetary unit. Many Sātavāhana inscriptions refer to payments in certain numbers of *kahāpanas*.

While the PMCs may have been all-purpose money, other coin types from mainland India and Rome may not have had monetary functions.²²⁸ The presence of coin-like objects may not always mean the presence of a monetary economy, or more precisely, the use of those coin-like objects as money. Nonmonetary functions of these coins can be identified based on the coins themselves and the context in which they were found.²²⁹ More specifically, the inscribed and uninscribed coins found in Sri Lanka may have been ornaments, since a standard weight pattern cannot be established. These coin-like objects are made of pure lead, which is easy to cast, were possibly cast at a very small scale in households or on individual request by goldsmiths and silversmiths.

The situation of inscribed and uninscribed coins in Sri Lanka is different from that in India. First, coins found in India are made of copper and lead alloys, which require specialized skill in metal working as well as furnaces attaining the high melting temperature needed for alloy manufacture. Second, the casting methods used in India could produce greater numbers of coins than in Sri Lanka, where we find molds for casting only one or eight coins at a time. Furthermore, the presence of a large variety of other lead artifacts and of miniature objects made of bronze and silver at Anuradhapura has been used to show the nonmonetary role of the coin-like objects. That coins are commonly found in the ritual contexts, such as *stūpa* deposits or in relic caskets, highlights their religious functions as well.²³⁰

The case of Roman coins in India raises similar questions. Roman coins have been of great interest since the beginning of antiquarian studies in the late eighteenth century. An important corpus had already been assembled by 1904.²³¹ Roman and Byzantine coins found in India date from as early as the Augustan period

²²⁶ For bibliographic details on the study of Roman coins found in India and its impact on the questions of Indo-Roman trade, see Darley 2015.

²²⁷ Walburg 2008, 46–48, 307–310.

²²⁸ Walburg 2005, 2008, 307–317.

²²⁹ Walburg 2008, 108–114.

²³⁰ Walburg 2005, 42–108.

²³¹ Sewell (1904) 1997. See also Turner 1989.

(27 BCE–14 CE) to as late as the rule of Leo III (the eighth century CE).²³² The coins most commonly found are silver *denarii* of Augustus and Tiberius, alongside gold *aurei* of the first to second centuries and *solidi* of the fifth century.²³³ Four features are common to Roman coins in South Asia: slash marks; countermarks, often identified as small punch marks; piercing or perforation for ornamental use and; imitations using gold or silver plating over a copper or lead core. They have been reported from almost 170 sites. The limited number of finds of Roman coins from the northern region comes from Buddhist *stūpa* deposits. In southern regions, they have been found in hoards as well.

The contextualization of the Roman coin finds reveals their relationship with Buddhist sites and local bodies of water.²³⁴ Further, they suggest that the role of the Roman coins in the subcontinent did not remain the same over centuries. Rather, the coins of the fourth century CE exhibit closer relationships with sacred sites than those of the three preceding centuries. The discovery of coins in ritual contexts, however, does not suggest that coins ceased to be of any economic value. Rather, it suggests that the society of the early historic and early medieval India allows for a fuzzy distinction between economic, ritual, and social contexts.²³⁵

VIII Conclusion

We started with a discussion of literary sources, which were theological in nature. Even the archaeological, epigraphic, and numismatic sources have very close connections with religion and religious practices. The archaeological and architectural remains are primarily related to religious structures (*stūpas* and megalithic burial remains), even the indicators of urbanism (i.e., burnt brick structures, coins, inscriptions, and sculptures). In the South Asian context, these varied sources above all allow us to study economic processes with regard to social values and beliefs that underwrite ritual practices, thus highlighting the interconnectedness between ritual and economic activities. The study of economic history in South Asia, therefore, requires one to adopt the approach of ‘ritual economy.’ This approach emphasizes the interdependence of economy, power, and human agency as contributors to society and social change.²³⁶

²³² Bhatia 1997, 667–669.

²³³ Ray 2008, 194, 197.

²³⁴ Darley 2015.

²³⁵ Darley 2015.

²³⁶ More about the concept of ritual economy and the need for this approach may be found in Wells and McAnany 2012; Hardenberg 2017.

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