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Review: A Landmark Study of Mauryan India

Reviewed Work(s): Mauryan India by Irfan Habib and Vivekanand Jha

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At a time when the paucity of standard books in most subjects, including history, is a matter of wide concern and serious debate, the Aligarh Historians Society under the able stewardship of Professor Irfan Habib has done yeoman service to the cause of Indian history by sponsoring the project, 'A People's History of India', with the avowed objective of promoting the scientific method in history and resisting communal and chauvinistic interpretations. The Society has already put the general readers, students and teachers of history alike, under a heavy debt by bringing out in quick succession concise standard monographs on (1) Prehistory, (2) The Indus Valley Civilization, and (3) The Vedic Age. The author of all these works is Professor Irfan Habib, whose profound scholarship in medieval Indian history, his field of specialisation, has over the years extended to the ancient period as well. These books on different aspects and periods of ancient Indian history amply demonstrate his erudition and skill in presenting the earliest phase of Indian history in a down-to-earth and simple manner. In the opinion of the present reviewer, *Mauryan India*, the fourth book in the series, written by Professor Irfan Habib in association with another reputed scholar of ancient Indian history, Dr Vivekanand Jha, is remarkable for its comprehensive coverage and competent handling of contentious issues on the basis of available epigraphic, textual and archaeological material and the latest research.

The first impression that one gets from reading the monograph is that it has been meticulously planned. It contains three chapters entitled Alexander's invasion and the formation of the Empire, Ashoka and the later years of the Mauryan Empire, and Economy, Society and Culture. The first chapter contains six sections pertaining to the condition of the people of northwestern India on the eve of Alexander's invasion, the course and repercussions of this invasion, the Nandas and the rise of Chandragupta Maurya, his reign (c.322- 298 BC), Bindusara and the early years of Ashoka up to c. 262 BC, and the apparatus of the Mauryan Empire. These are followed by four extracts from the Puranic passages on the Nandas and the Mauryas, from Justin's narrative of the rise of Chandragupta Maurya, from the account of Megasthenes on the municipal government of Pataliputra, and from Ashoka's Rock Edict XIII, and three incisive notes on the Mauryan chronology, Kautilya's

*Arthashastra* and the bibliography. The second chapter encompasses five sections devoted to Ashoka's inscriptions, his *dhamma*, his reign, successors and the end of the Empire, and South India and Sri Lanka, followed by seven extracts on the *dhamma* formulary, measures of public welfare, appointment of *dhamma-mahamatas*, religious coexistence, conduct of government, administration, judgement and punishment, a proclamation of achievement, and two notes – one on epigraphy and the other on bibliography. The third chapter also has five sections on economy, society, religion, writing, language, learning and literature, and art and architecture, three extracts on the seven castes of Megasthenes, caste *dharma* in the *Arthashastra* and Ashoka's pilgrimage to the Buddha's birth-place as described in his Rummindei Pillar Edict, and two notes on the dialects of Ashokan Prakrit and the bibliography. Six tables relating to the chronology of important events (pp. 39, 97 and 168), the constituents of *dhamma* and their occurrences in the edicts (p.64), the Ashokan Brahmi alphabets (p.107), and the list of crops, stages of their sowing and harvesting seasons (p.115), nine maps depicting the limits of Alexander's conquests in northwestern India with meticulous mention of the Greek equivalents of Indian place-names and rivers with their modern course (p.7), the extent of the Mauryan Empire in c.260 BC with Prakritised names of places and tribal people as mentioned in Ashokan edicts (p.25), the spread of the Mauryan Empire in the east (p.55), north (p.56), south (p.57), and west (p.58), South India and Sri Lanka in c. 300—100 BC (p.93), the Mauryan economy, showing the find-spots of minerals, crafts and quarries (p.120), and the linguistic zones and territories, where the Ashokan Prakrit dialects were used (p.152), and twenty illustrations from different sources, duly acknowledged, enrich the content of the book and make the historical narrative of the remote past quite realistic. They also bear out the pains taken while giving shape to this scholarly monograph.

The portrayal of the conditions of the people of northwestern India immediately before Alexander's invasion is evidently the appropriate starting-point for a work dealing with Mauryan India. With the help of the details preserved by a number of historians of Alexander—Diodorus, Quintus Curtius, Aristobulus, Strabo, Plutarch, Onesicritus and Arrian (many of these are later than the invader but preserve accounts retrieved from their predecessors)—the authors point out that there was no trace of the earlier Achaemenid suzerainty over the Indus basin, where tribal chiefs or kings such as Porus (Puru) and Absares (Abhisara) ruled, and though a few communities on the margin of the settled zone were still in the 'gathering' stage and primitive, the people generally were by no means 'barbarians', lived in villages, fortified towns and cities, practised flood-dependent agriculture and engaged in trade, owned numerous and excellent cattle, produced rice, 'bosmoran' (probably bajra millet) and sugarcane ('honey- yielding reeds' of Nearcus), used cotton for clothing, and

dug out rock salt in the Salt Range. The authors note the absence of any direct reference to the caste system in the Greek narratives, but underline explicit references to the 'Brachmanes' (Brahmanas) as 'philosophers', who, as advisers to the local rulers, occasionally induced them to resist Alexander's troops, and perceive in the ruling tribal clans potential, if not actual, Kshatriyas. The prevalence of slavery in some areas, especially in the kingdom of Musicanus, the practice of widow-burning at Taxila and among the 'Cathei', located between the Ravi and the Beas, and the custom of exposing dead bodies to vultures at Taxila are referred to. The presence of Jain ascetics is attested, Calanus is held to be a Jain or Ajivika monk, temples and image-worship are deemed to be inconspicuous features of Brahmanism, and the bypassing of Buddhism is regarded as 'curious'.

The ground for Alexander's successful nineteen-month military expedition in northwestern India (Spring 326 BC—Autumn 325 BC), the authors emphasize, was prepared by his father Philip II, who, as the ruler of Macedonia (359-336 BC), with his well-equipped, trained and disciplined army comprising a light cavalry of skilled archers and an infantry fighting in phalanx formations with protective shields, long pikes, large wooden catapults, mobile wooden towers and battering rams, overran the city-states of Greece and became its master. We have a graphic account of the successive battles and victories of Alexander (336-323 BC) in Asia Minor and Afghanistan and the collapse of the mighty Achaemenid Empire before he launched his Indian campaign with the sacking of Peucelaotis (Pushkalavati), modern Charsadda, north of Peshawar. The 'Assakenoi' tribe was subdued next and their major town Massaga was captured. After taking the town of Nysa, Alexander's army crossed the Indus to reach Taxila, whose ruler 'Omphis' (Ambhi) had already offered allegiance. Porus confronted Alexander after the latter's troops crossed the Jhelum, but was defeated and retained as a subordinate ruler in his kingdom. Crossing the Chenab and then the Ravi, the Greek forces defeated the tribe of the 'Cathei' and seized the fort of Sangala. Alexander's wish to advance into the Gangetic basin after crossing the Beas remained unfulfilled, as his army, tired and homesick, refused to march further and obliged him to retreat, in September 325 BC. En route, he accepted the final submission of Absares and of Sophytes (Saubhuti), the ruler of the Salt Range. This was followed by the defeat and large-scale massacre of the 'Malloi' (Mallas), and the subjugation of the 'Ambastanoi' (Ambashthas), of Musicanus, the ruler of northern Sindh, of Oxycanes and of Sambus, who surrendered his capital Sindamana. Reaching Patala in the Indus delta, Alexander made arrangements for the administration of the conquered territories. He left the northern portion of his territories with Philip and the southern portion down to the sea jointly with Oxyartes and Peithon. After Philip's murder at Taxila, the province was assigned to Eudemus. Gedrosia and

Arachosia were placed in charge of Sibyrtius. Already gravely injured while fighting against the 'Malloi', Alexander died in June 323 BC.

Historians differ widely in their assessment of the extent of Alexander's success and the impact of his conquests in India. V.A. Smith, an imperialist historian, does not see India being Hellenized: "She continued to live her life of 'splendid isolation' and soon forgot the passing of the Macedonian storm".<sup>1</sup> R.K. Mookerji, a nationalist historian, refers to the evidence of resistance to foreign invasion from many quarters: "There was in evidence all over this vast area a general spirit of patriotism instigating resistance to foreign invasion".<sup>2</sup> He thinks that Alexander's invasion promoted political unification of the country, helping in the rise of an empire to be shortly founded by Chandragupta.<sup>3</sup>

K.A. Nilakanta Sastri observes: "Though India was not Hellenized at any time in the sense in which Western Asia was, there was much active contact between India and the Hellenistic kingdoms, and in the realms of art, currency and astronomy India became a debtor".<sup>4</sup>

The estimate of the authors of the present work is balanced and realistic. They do not gloss over the "bouts of plunder and massacre"—"booty on an immense scale in the form of treasure, goods and captives turned into slaves"—and underscore the function of the regime Alexander set up to be "to extort enough tribute to maintain foreign garrisons, and to provide wealth and luxuries to Alexander's own courts, satraps and captains". They, however, stress that these conquests resulted in the founding of many towns with a mixed population of Indians, Greeks and others, greater communication and commerce between India and the Hellenistic world, and 'intercultural fertilization', which manifested itself in the use of eras, the efflorescence of sculpture, the influx of Hellenized elements into the Mauryan bureaucracy, and subsequently in the diffusion of scientific knowledge from the Greek world to India (pp. 11-12).

Making a careful and critical use of all the available sources—Brahmanical, Buddhist, Jain, Greek and others, which seriously differ from one another in various details—the authors present a cogent account of the rise of Chandragupta Maurya at the expense of the preceding Nanda dynasty. The Nandas ruled over a vast kingdom extending from western Uttar Pradesh to Orissa and had a large army and substantial resources at their command. But they became very unpopular because of their harsh rule and oppressive taxation, which made it possible for Chandragupta to supplant them and occupy the throne of Magadha around 322 BC. He now started nibbling at the territories under the Greek and Macedonian occupation, which had been considerably weakened by continuous internecine conflicts among Alexander's many ambitious successors. This alarmed Seleucus, who was in control of Babylon. Seeing Antigonos preoccupied in Egypt and Greece after the defeat of his troops

by the Ptolemy of Egypt in Gaza, Seleucus marched eastward. He subdued Bactria and crossed the Hindukush, but before any battle with Chandragupta could be fought, a treaty was concluded with him. Seleucus ceded to Chandragupta the territories of Paropamisadae (Hindukush and the Kabul region), Arachosia (Kandahar) and Gedrosia (Baluchistan), despatched Megasthenes as an envoy to his court at Pataliputra, and received 500 elephants from Chandragupta. Chandragupta's conquest of Gujarat and Malwa is borne out by his governor (*rashtriya*) Pushyagupta constructing the Sudarshana lake at Girinagara (Girnar) in Saurashtra. Though the authors are not sure about Chandragupta's conquests further south, they rightly hail his success in bringing the whole of northern India and Afghanistan under his control as an "outstanding military achievement". They praise Megasthenes, among other things, for his first-hand account of the Mauryan administration, for identifying endogamy and hereditary occupations—two important features of caste—among the Indian communities, and for projecting the 'Sarmanes' (Shramanas) as a class of 'philosophers' along with the 'Brachmanes', but criticize him for his proneness to describe fantasies on hearsay including stories of tribes of men without mouths, unicorns and gold-digging ants.

The section dealing with the administrative apparatus of the Mauryan Empire with Pataliputra as the capital city is marked by the authors' originality and novelty in interpreting the sources—Ashokan inscriptions, the *Indica* of Megasthenes and the *Arthashastra* of Kautilya—on various issues. They draw attention to a major change in the day-to-day functioning of the king when Ashoka took over. He gave up hunting expeditions and pleasure trips, and kept himself occupied with the affairs of the state without any interruption for personal reasons. In the Mauryan set-up the king's family members were appointed viceroys and governors in the provinces. For example, the princes (*kumara*) held these positions at Ujjain and Tosali; *Kumara* Samva is mentioned in the Panguraria edict and an *ayaputa* (*aryaputra*) (the lord's son) occurs in the Brahmagiri inscription. The authors point out that the *parisa* (Sanskrit *parishad*) or Council occurring in two epigraphs of Ashoka merely carried out the king's orders and routed them to officers called the *yutas* (Sanskrit *yuktas*). As such, it differed from the *mantriparishad* of the *Arthashastra* and was not an advisory council of the king functioning in his presence. They rightly consider the *mahamatas* to be the high officials of the state equivalent to the ministers, who were sometimes attached to the governors and were stationed in all major towns such as Shravasti, Kaushambi, Samapa and Isila. Besides, there were *mahamatas* for the border, women and the capital township of Pataliputra. Of these, the *mahamata* for women was concerned with grants or alms to them. Citing the evidence from Megasthenes, the authors have shown that the capital city was governed by six bodies, each comprising of five officials, who looked after (i) the

industrial crafts, (ii) foreigners, (iii) births and deaths, (iv) trade, weights and measures, (v) prevention of fraud in sale, and (vi) collection of tax on goods sold.

The authors testify to the existence of fortified towns called *kotavishaya* and the use of rammed earth in the fortification at Kaushambi and of mud at Taxila. On the basis of Megasthenes as cited by Strabo and Arrian, Pataliputra is shown to be a large city spread over an area of 14.8 kilometres in length along the Ganga, 2.8 kilometres in width, the wooden wall protecting it having 570 towers and 64 gates and loopholes at intervals for use by the archers; the surrounding wall is said to have been 600 feet wide and 30 cubits deep. In their opinion, the governors at Ujjain and Taxila enjoyed substantial functional autonomy. They also refer to a few autonomous territories, which had their own magistrates and not the king's officials to govern them. Apart from these, they specify ten groups of people, who occupied a position different from the regularly administered areas of the Empire: (i) Yona, (ii) Kamboja, (iii) Gandhara, (iv) Rathika, (v) Pitinika, (vi) Bhoja, (vii) Nabhaka, (viii) Nabhapanti, (ix) Andhra and (x) Parinda.

The provincial administration is held to have been looked after by functionaries called the *yutas*, *rajukas* (Sanskrit *rajjukas*) and the *padesikas* (Sanskrit *pradeshikas*). Attention is also drawn to the strong network of communications for the governance of the Empire, with officials looking after the construction of roads and setting up of the pillars at the distance of ten stadia. If one were to give credence to the two Aramaic inscriptions from Laghman in Afghanistan, both give distance in bows from particular spots on the *krpty* (*karapathi*), Old Persian for 'army highways'. Ashokan pillars themselves marked the highways. Ashoka kept himself informed about the affairs of the people through reporters (*pativedakas*) (Sanskrit *prativedakas*) and officials who went on tours of inspection every three or five years. Both Megasthenes and the *Arthashastra* of Kautilya refer to the vast network of spies for gathering and transmitting news in the *Arthashastra* they appear as conspirators and agents provocateur as well. One of the features of the bureaucracy pointed out by the authors is the influx of people from the northwestern area, where writing had been in vogue for a long time. The appointment of Tushaspa and Chapada in the Mauryan administration is mentioned as typical example; and important cultural and political consequences of such a development are emphasized.

The authors dwell on the differences between Megasthenes and the *Arthashastra* of Kautilya on the amount of taxation under the Mauryas. While Megasthenes mentions one-fourth of the produce as tax to the king, the *Arthashastra* indicates the amount to be one-sixth of the produce. The taxes were primarily collected in kind and stored in state granaries (*kothagala*). This is

borne out by the Mahasthan stone-plaque inscription from Bangladesh and the Sohagaura bronze-plaque inscription from northeastern Uttar Pradesh. Taxes collected from artisans, traders and others varied a great deal in different parts of the Empire. Taxes were also collected in cash. A hoard of coins found at the Bhir mound at Taxila (c. 320 BC) and the *Arthashastra* statements regarding the striking of punch-marked silver coins at the state mint and the debasement of currency through the mixing of a quarter alloy of copper in it indicate the nature of cash transactions during the period.

The authors have rightly taken Kautilya's *Arthashastra* to be a treatise restricted to a special aspect of *artha*—the holding and enhancing of royal power, which is also the royal road to wealth. It contains counsels addressed to a king of a small or moderate-sized kingdom about how to maintain power and effectively overcome enemies. It deals with the science of polity in the broadest sense. Everything that can fulfil the king's ambitions, or serve his interests, is recommended, without any moral constraints. On the basis of the internal evidence found in the opening of the book, the authors hold the text to be compiled from certain earlier texts on the science of *artha*. They point out that its authorship is ascribed in four passages to Kautilya, who is identified once as the person who overthrew the Nandas and that it is in the later tradition that the author is called Vishnugupta, while Chanakya never occurs in the text. They treat Kautilya as a historical figure and a minister of Chandragupta, whose opinions on various issues are cited along with those of others and sometimes alone, but which invariably prevail, and are treated as final and definitive. It gives to the authors further basis to treat Kautilya as the author of the text, a prose work in the *sutra* form, where each sentence usually contains a separate counsel.

The compilation of the text is taken to cover a long period of time (p. 69), and it is presumed to contain material from the pre-Mauryan, Mauryan and post-Mauryan times, the text having undergone additions and deletions. According to the authors, the process went on until the second or even the third century AD, when the compiler finally arranged and edited the material. How much he interfered with the earlier versions, cannot be determined, since these are not extant. In trying to pinpoint the pre-Mauryan strata of the text, the authors refer to the mention of Sanghas and coarse silver and copper coinage with marks (*lakshana*), which can only refer to the punch-marked coins minted in northern India from about the sixth century BC. References to the Shakyas, Ajivikas and other heretical monks, divorce and women's remarriage, too, in their opinion, belong to the earlier milieu. Although the core political unit in the *Arthashastra* is a kingdom of moderate size, the sovereign's realm (*chakravartikshetram*) envisaged for the future comprises the territory from the Himalayas to the seashores. In brief, the authors' perception of the various problems relating to the *Arthashastra* shows a mature understanding of the text.

Another baffling, but important, question which has engaged the attention of the authors is the beginning of writing in India. In this exercise they repeatedly take recourse to the citations from indigenous and Greek sources. The Greek sources, by and large, negate the evidence of writing in this country in the period of Alexander and Chandragupta, although Nearchus refers to writing on closely woven cloth (p. 147). The authors identify the latter as Aramaic. Actually there are three major viewpoints regarding the antiquity of writing in India. While Georg Buhler assigns the introduction of the prototypes of Brahmi letters in India to 800 BC, A.B. Keith traces the development of writing in India to the fifth century BC, and K.R. Norman holds Brahmi writing as Ashoka's own invention under the influence of the Achaemenids. While most of the Indian scholars even today take Panini to belong to the fifth century BC, the authors of the present work seem to be influenced by the views of George Caradona about the date of Panini in assigning him to the middle of the fourth century BC.<sup>5</sup> They maintain that the use of the term 'Yavanani' and the mention of *lipi* for script by Panini suggest a date later than Alexander's invasion, though they do not rule out the possibility of these two words in Panini being later interpolations (p.155), which would keep the issue of Panini's date still open. They do not find the Pali Canon of Sri Lanka of much help in resolving this issue, as these were put to writing in the first century BC. They depend on the authority of Megasthenes (as cited by Strabo), according to whom the Indians used only unwritten laws, for they were ignorant of writing and relied in all matters on memory. Whereas Brahmi characters of the fourth century BC have been found in Anuradhapuram, in India no inscribed potsherd is available to this date. As such, Brahmi, originating in Sri Lanka, may have come to India in the third century BC. In the light of Brahmi originating in the fourth century BC, the theory that Brahmi was a deliberate creation of the time of Ashoka, under the influence of Greek and Kharoshthi, does not stand (p.149), say the authors. They also allude to the use of *bhasha* for Sanskrit as spoken language. According to Panini, it was the language of the priestly elite of northern India; the common people used Prakrit forms.

The chapter devoted to economy, society and culture is a significant contribution of the authors. It covers a large variety of subjects, hardly ever touched upon on this scale in a book of this period. For instance, in the section on economy, the authors write about timber and ivory-yielding forests, cultivation, irrigation, water-works and various crops under agricultural produce. Under the non-agricultural produce, they dwell elaborately on pottery from the different NBP sites, minerals, metals, textiles and crafts, and the building industry based on stone pieces cut from Chunar and Mathura and baked bricks from a number of sites. Trade, trade-routes and coins also receive adequate treatment in this section.

It is not understood how the authors have expressed reservation about cotton being an annual agricultural crop in the *Arthashastra* (pp.115-16, 122). Though its production was limited and it was by no means the only source of clothing, there is ample evidence to show that it was recognized as an agricultural crop in the text, where the Director of Agriculture, assisted by the experts in agriculture and the science of plants, is advised to collect in the proper season seeds of all kinds of grains, fruits, vegetables, roots, flax and cotton (*karpasabijani*).<sup>6</sup> The farmer is asked to collect and burn the seeds of cotton and slough of a serpent, because serpents do not remain where there is this smoke.<sup>7</sup> A variety of cotton, red cotton plant (*araktakarpasa*), is said to make a blinding smoke, when made into dough with many articles.<sup>8</sup> The seeds of cotton, mixed with urine and excreta of certain birds and animals and various seeds and skins, too, are purported to make a smoke capable of killing people.<sup>9</sup> Two varieties of cotton coming from the dog-rose plant and from the bush-like, plant may have been in use.

In the section on society, apart from the ruling elite, the overall state of the caste system, slavery, women's position, *stridhana* and marriage have been analysed. On the nature of the caste system as gleaned from the study of the Ashokan inscriptions, the authors point out that Ashoka sidesteps the issue of caste and shows himself favourably disposed towards the lower classes, including 'slaves and servants'. They observe that in general the Ashokan edicts represent a counter-current to the evolving caste system. In their opinion Ashoka undermined the significance of rituals, as to him one's status after rebirth depended on the working of the law of *karma* and there is no place for God or deities or divine intervention in the matter. The references to men mingling with gods (*devas*) in Minor Rock Edict I and the exhibition of divine forms (*deviyarupani*) in Rock Edict IV are dismissed as rhetorical or figurative. There is no doubt that Ashoka's approach differs from that of the *Arthashastra* of Kautilya and the Puranas.

In order to substantiate the lack of social mobility in the caste system, the authors use the *Majjhima Nikaya*, a Buddhist text composed in the Mauryan period, which refers to the two divisions of society into masters and slaves among the Yona-Kambojas in the Graeco-Iranian borderland of the Mauryan Empire; here a change of status was possible, with the free becoming slaves and the slaves becoming free persons.<sup>10</sup> This was in sharp contrast to the practice in India, where a person belonging to a *varna* remained tied to it for good, usually leaving the legacy to his sons and their successors (p.135). The authors argue that the slaves, though not untouchables, were not Aryas and hence were not assigned to any *varna*. They emphasize the importance of slavery in India and do not find any substance in the statement of Megasthenes that there was no slavery here. They also do not agree with the view expressed by Arrian that like the people

of Sparta, Indians had only helotage or peasants bound to the land. The authors demonstrate with the help of the *Arthashastra* that the situation was different here. They attribute the misconception of Megasthenes regarding the absence of slavery in India to be the legal dictum invoked in the *Arthashastra* that no Arya can be reduced to slavery (*dasabhava*). In their opinion the Ashokan inscriptions and the Buddhist Pali texts of the period bear eloquent testimony to the harsh treatment of the domestic slaves at the hands of their masters. The slaves could be inherited, sold and gifted away at their master's will.

With regard to the place of women in Mauryan society, the authors do not find a uniform picture of their condition. The womenfolk at the lowest rung of the society, such as the dancers, fishermen, fowlers, cowherds and vintners worked as equal partners with their husbands and other male members in occupational activities. In their cases, restrictions on freedom did not apply, whereas the movements of women of the upper strata were severely restricted. Respectability required them to remain confined to the four walls of the house.

The section on religion deals with Brahmanism, Shaivism, Bhagavatism, Buddhism, Jainism and other heretical sects. It also delineates the main trends in the philosophical systems of the time—Sankhya, Yoga, Lokayata, etc. According to the authors, in spite of being challenged, Brahmanism remained the dominant and widespread religion in the period. However, its ideas were getting transformed. The most notable change was the decline of the Vedic ritual sacrifice. The notion of *ahimsa* had permeated Brahmanism. The authors see the germ of *bhakti* in the Bhagavata cult of Vasudeva. Shiva, too, was being worshipped and the *Arthashastra* refers to him as a god whose temples are to be built in the city. Terms relating to the temple occurring in this text such as the temple-cattle (*devapashu*), temple slave-girls (*devadasi*) and god's house (*devagriha*) are mentioned by the authors. The prevalence of the worship of the mother goddess and the Shakti cult is attested by the terracotta figurines found from a large number of sites and analysed by the authors from the excavations at Taxila, Ahichchatra, Sonkh, Kaushambi, Rajghat, Buxar and Patna.

The section on writing, language, learning and literature is incisive. The works on medicine, mathematics, astronomy and other subjects are assessed here. The importance of the science of medicine, which Patanjali refers to as *Vaidyaka*, is noted. Jivaka was an outstanding representative of this science, much before the Mauryas. Nearchus reports that on being told of the Indian physicians' skill in curing snake-bite. Alexander had them collected to treat his troops; and then they also treated other diseases and pains. This is not surprising. The *Mahabharata*,<sup>1</sup> the *Matsya Purana*<sup>2</sup> and the *Vishnudharmottara Purana*<sup>3</sup> refer to the large-scale use of snakes, kept in innumerable earthen pots, in armed encounters in ancient India. These are said to have been unleashed in large numbers against the enemy ranks to inflict casualties and cause

consternation and chaos. The *Arthashastra*, too, refers to the storage of poisons and poisonous snakes in jars, along with their antidotes, in royal forts, and recommends the use of snakes and poisons against the enemies.<sup>4</sup> Diodorus Siculus reports that a large number of Alexander's troops and his general Ptolemy were wounded by weapons of steel, anointed with deadly tincture, which was prepared from snakes of certain kinds, by the natives in the Harmatelia city near Brahmanabad or Mansura.<sup>5</sup> Ashoka's concern for the treatment of human beings and cattle, and also for the supply of medicinal herbs, roots and fruits throughout his dominions and in the neighbouring kingdoms, is borne out by Rock Edict II.

In mathematics, the authors have referred to the *Shulbasutras*, which they have assigned to 350-150 BC (these are usually dated in the fifth-sixth century BC), their oldest text, the *Baudhayana Sutra*, and the *Zhou Bi*, a Chinese text of the late fourth century BC, which has similarity with some of the details of the *Baudhayana Sutra*. In astronomy the *Vedanga Jyotisha* represents to them the state of knowledge or belief in the period. The authors treat part of the *Mahabharata* as composition of Mauryan times, whereas the *Ramayana* is assigned to the post-Mauryan period, when the use of new metres in poetry started. In their opinion the compilation of the Buddhist Pali Canon made substantial progress in Ashoka's time and the Jatakas had become a part of the Buddhist sacred lore by the end of the Mauryan period.

The authors take note of the dialectical variations in Prakrit used in the edicts of Ashoka because of the linguistic peculiarities of the provinces and identify four main dialects: (i) Magadhi, (ii) Ujjaini (iii) Western and (iv) Gandhari, with three sub-dialects Kalsi, Kalinga and Southern. On the basis of these variations, they identify five linguistic zones: (i) the erstwhile Achaemenian territories in India where Aramaic was being used, (ii) Taxila and Afghanistan, where Irano-Aramaic, based on the Avestan language, was in use, (iii) parts of Afghanistan, where Greek written in Koine and Attic (Athenian variety) was employed, (iv) south India outside the Ashokan dominion, where Tamil was in use, and (v) Sri Lanka, where Old Sinhalese or Tamil-Brahmi was used. It is well known that the Ashokan inscriptions offer the earliest evidence of the presence of regional dialects in Prakrit and that Magadhi is the official standard dialect in which the original edicts were issued from Pataliputra. By pointing out the variations in the texts, the authors demonstrate the depth of their understanding of grammar in the formation of words. Their comparison of the dialects used in different versions speaks well of their understanding of the subtle nuances of the inscriptions.

The authors have made good use of the archaeological data in scrutinizing the spread of Brahmi in India. They discern the influence of early Tamil or Dravidian orthography on the Ashokan inscriptions of the South (p. 92). They

point out that the archaeological potsherds bearing Tamil-Brahmi writing, dated to the second century BC, are found from a large number of sites such as Arikamedu (Pondicherry), Kodumanal (Erode district) and Alagankulam (near Rameshwaram). According to them, this area witnessed the influx of Brahmanical influence earlier. Excavations at Anuradhapuram have brought to light the evidence that confirms early Indo-Aryan presence in Sri Lanka (p. 95). The evidence comes as early Brahmi graffiti on potsherds from excavated sites assigned to c. 450-275 BC. Trade from Afghanistan or Baluchistan with this region (p. 95) in such items as lapis lazuli, carnelian, etc., is borne out by archaeological data. It is significant that the graffiti from Anuradhapuram is in Prakrit. The authors draw attention to the Prakrit that prevailed in Sri Lanka and its affinity with the Prakrit of northwestern India, as carried by Ashoka's Kharoshthi. They are of the opinion that the original Prakrit of Sri Lanka was derived from the northwestern Prakrit dialect and that the Brahmi script of Sri Lanka was created under the Aramaic influence. On the grounds that there is no predecessor of the pre-Ashokan Brahmi anywhere, except in Sri Lanka, they hold that Mauryan India received that script from Sri Lanka. If one gives credence to Arrian's account, owing to the marriage of his daughter, Pandia, in the Pandya country in the fourth century BC, Herakles had relations with this part of the country.

The authors prefer Ashokan inscriptions to the Buddhist tradition recorded in the *Dipavansa* and the *Mahavansa*. On the stone slab from the Kandahar Greek version of the Ashokan edict, followed by the initial portion of Rock Edict XIII of Ashoka, they express the possibility that it could be a part of the panel of slabs on which the entire series of the 14 Rock Edicts of Ashoka was prescribed in Greek.

The authors rightly maintain that the history of fine arts in India begins with Ashoka and his use of stone for monumental art and architecture. They minutely examine all the 25 pillars of Ashoka on the basis of their physical presence, content, features and artistic dexterity displayed in them. They do not agree with J. Irwin, who held that two or more hands were involved in envisioning and installing them. According to them, all the pillars conform to a uniform design to such a great extent that it is not possible to think of several authors of these pillars (p.161). On the basis of their usual locations near the sacred sites of the Buddhists, *stupas* and pilgrim routes, they rightly argue that the Ashokan pillars might have been set up even in towns and places on the highway as symbols of both royal majesty and *dhamma*. That explains their being called *dhamma* pillars in Pillar Edict VII by Ashoka. On account of the pinkish colour of the Delhi-Topra Pillar, they regard it a product of the quarries near Mathura, whereas most of the other Ashokan pillars are made of sandstone quarried from Chunar near Varanasi. The difficulties faced and the technique

adopted in carrying these long cylindrical stone pillars to their respective sites and the engagement of stone-cutters and polishers at these sites in order to make these pillars look glossy and fresh are correctly visualized. The authors also justifiably do not agree with the view that the 84-pillared hall built by Ashoka at Kumrahar, with the pillars measuring 9.3 meters in length, was meant to hold the Third Buddhist Council in the light of the inconclusiveness of the evidence for holding the Council itself (p. 163). Their treatment of Ashoka as the patron and precursor of the rock-cut cave architecture (he built and gifted three caves in the Barabar hills to the Ajivikas), which endured for long, is also correct.

The authors see the emergence of a new tradition initiated by Ashoka in stone sculpture. They take into account the exquisite craftsmanship shown by the artists in the treatment of the capital of Ashokan pillars and the relief in abacus, which includes various species of animals and birds. They underline the realism of the artists, whose portrayal of contours and proportions conforms to the natural form of the animal. They also endorse Niharajan Ray's view regarding steady progress in the modelling of the lion at each stage from Kolhua to Lauria Nandangarh and, finally, Rampurwa, and John Marshall's praise of the design and skill shown in the Sarnath lions and the bell-shaped base on which they stand as "unsurpassed by anything of their kind in the ancient world". They praise the aesthetic tastes of the executors of the Ashokan pillars, who left them free from ornamentation, recapitulate the inspiration received from the Achaemenian and Greek art, specify the innovations carried out by the Mauryan sculptors, and underscore Buddhism as the impelling force behind the lively and sympathetic depiction of the animals in it. The authors surmise that the Mauryan sculptor may have drawn on the Indian wood-carver's art and lament the loss of the exquisite specimens of the timber architecture (p.167). The grandeur and glamour of the art and architecture of the royal court have not deterred the authors from appreciating the subtleties of the folk art which has remained neglected hitherto. They criticize the archaeologist, who in the 1870s glossed over the workmanship of the drawer of geometrical, human and bird designs in the Jogimara cave in the Ramgarh hills (p.167). This shows the keenness of the authors to go to the main source and place a piece of historical information in its proper context.

The vignette of the book adorned by the designs of the lion capital from Sarnath, the Ashokan pillar from Lauria Nandangarh, the Brahmi letters from the Rummindei Pillar inscription and the terracotta toy-cart with two oxen on its panel, indicated yoked by a rope, from Atranjikhera, contributes to its elegant composition. As regards the illustrations, the first is 'Alexander's medallion' of c. 323 BC from Babylon (p.9). Its obverse shows the assault by a Macedonian warrior, riding a galloping horse and holding a spear-like weapon, on two enemy warriors seated on the back of an elephant. The enemy warriors on

elephant-back, suffering pangs from the spear piercing from behind, react to the attack in defence, and the pillion-rider is shown aiming his javelin at the horse rider. The reverse of the medallion depicts Alexander clad in armoured dress, with a high rising helmet on the top of his head covering his figure up to his cheeks. The shield on his chest seems to have a weapon fastened to it, showing its handle coming out. He is shown holding in one hand the middle of the two-sided six-pronged thunderbolt and in the other hand a big iron rod exceeding his height in length. On the top facing his front is displayed a winged nymph, holding a circle in her hands. The authors took this picture from A.B. Bosworth. They point out the absence of the saddle and the stirrup on the horse. The second illustration shows two silver coins of Sophytes (p. 17). The obverse shows his bust with helmet extending down to the cheek, whereas the reverse shows the cock and the Greek legend, written as Sophytou. The picture is taken from A. Cunningham.

The third illustration shows a prince on horseback from the panel of the north gateway of the Sanchi Stupa (first century BC) (p. 28), appended to which is the figure of a horse-bridle from the west gateway of the Sanchi Stupa. Although late in time, the illustration presents the spectacle of princely grandeur along with the retinue, human dwellings of the time and the way the people dressed themselves for participation. The prince is shown under the parasol, held high by an attendant; he is guarded by spearmen; people have turbans on their heads; the procession has, among others, drummers in it; and the horses are harnessed. The authors again note the absence of the saddle and the stirrup. The illustration is from F.C. Maisey.

The fourth illustration, depicting the North gateway of the Sanchi Stupa (p. 29), is also after F. C. Maisey. It focuses on the portrayal of the horse-driven chariot which formed an important part of the Mauryan army. The fifth illustration shows the engraving on the Sohagaura copper plate and the two granaries depicted on it (p. 37). The engraved inscription contains the official instruction to keep the granaries in readiness to meet any eventuality—scarcity or famine. The authors have taken the facsimile of the Rummindei Pillar inscription from V.A. Smith, with transliteration by Hultzsch, as another illustration (p.60). Yet another illustration showing Ashoka's visit to the *stupa* of Ramagrama is from the South gateway of the Sanchi Stupa 1 (p.73). According to J. Marshall and A. Faucher, the identification of Ashoka is based on the story in the *Ashokavadana*. The internal details of the panel show king Ashoka being taken to the *stupa* by the Nagaraja, who succeeded in persuading him not to take away the relics of the Buddha deposited therein.<sup>6</sup> The Nagaraja appears as the tallest figure standing erect in a corner, haloed by several hoods of serpents. Ashoka is shown with his entourage. Besides establishing Ashoka's personal faith as Buddhism and his concern for warding off schism in the Order, the

illustration shows the shape, size and elegance of the *stupa* and corroborates the story of the *Ashokavadana*.

Among the illustrations pertaining to the day-to-day domestic and agricultural use, the authors have picked up the specimens of iron sickles found from the NBP phase of the Mauryan levels (p.112) from the Atranjikhhera excavation reports of R. C. Gaur. Another illustration is the Mandor frieze of the twelfth century, depicting the late form of the *noria*, an irrigation mechanism in which several pots are transferred from the tops of rimless spokes to the rim of the wheel (p. 113). Installed at any source of water, it was operated by the pressure of human shoulders. The illustration is based on T. Schioler. The mechanism, its operation and use become evident from seeing the figures of men handling the machine and the two camels waiting for their turn to drink water.

Another illustration shows a variety of tools, such as axes, adzes, knife, tongs, anvil, nails and hoes from the Taxila excavation report of John Marshall (p. 123). These indicate the high level of technology attained under the Mauryas.

By giving the figure of one of the diagrams, out of ten, from the *Sirat-i-Firozshahi* manuscript in the Khuda Bakhsh Oriental Library, Patna, showing how the Ashokan pillars were handled by means of ropes and capstan from the ground on to a ten-wheeled cart for their transportation to Delhi (p. 133), the authors draw our attention to an important aspect of Ashoka's reign. In their opinion the engineers of Ashoka may have learnt the technique from the reports of Alexander's ballistic machines or from their contact with such Greek and Macedonian officials as took service with the Mauryas (p.124). The illustration showing the specimens of the Mauryan punch-marked coins of 'series VI b' from P. L. Gupta and T. R. Hardaker (p. 129) is equally illuminating and gives some insight into the economy of those days. In yet another illustration are given two terracotta figurines, called 'mother goddess', reported from stratum II of the Bhir Mound at Taxila from the excavation report of John Marshall (p.141).

By reproducing the inscription from the Jogimara cave of Ramgarh hills, after A. Cunningham (p. 150), in which the artist Devadina from Varanasi expresses his love for *devadasi* Sutanuka, the authors show the extent to which the art of writing in Ashokan Brahmi was in vogue among the people. This variety of Brahmi writing did not continue later, we are told. Whereas many of the Ashokan pillars have lost their capitals with reproductions of animals, the Lauriya Nandangarh pillar with its lion capital, associated with the Buddhist sacred site and pilgrim route, stands intact in northern Bihar (p.160). The precursor of the rock-cut caves in India, the Lomasha Rishi cave in the Barabar hills, situated north of Bodh Gaya (p. 164), named probably after the great exponent of the merits accruing from visiting the ancient *tirthas*, was intended as a retreat for the Buddhist monks. Three cave inscriptions in the hills record the gift of the caves to the Ajivikas by a king Piyadasi, who is Ashoka himself.

Among the other exquisite figures of the Mauryan art are the two elephants, one cut into rock at Dhauli and the other engraved on the rock at Kalsi (p. 165), and the famous lion capital at Sarnath (ibid). The winsome figure of the Didarganj Yakshi, though belonging to the first century BC, illustrates with its polish and proportion of the torso the excellence which the artists of the Mauryan period may have attained in an earlier period, had they not been prevented from making human sculptures. The apparent folds in the drapery, the locket in the neck, the necklace hanging down to the navel, the earring in the ear, the *chowry* (fly-whisk) held in the right hand, the *jhanjha* (sound making ornament) above the ankle—all add to the beauty of the sculpture (p.166). Two terracotta figurines in a plaque, showing a man and a woman, and the matrix from which the plaque was cast, taken from stratum II of the Bhir mound at Taxila (p. 168), reproduced from John Marshall, show how much popular the folk art was during the Mauryan period, as a large number of its pieces may have been produced with the help of the matrix.

Keeping in view the depth of research that has gone into the book, the wide coverage of themes and freshness of interpretations, *Mauryan India* is an outstanding publication by two distinguished historians. More elaborate than the earlier three monographs in the series, it is immensely readable and well-produced, though a few misprints have crept in especially in the index. Specialists, students and general readers alike will find it extremely useful.

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### Notes

Based on Irfan Habib and Vivekanand Jha, *Mauryan India* (Aligarh Historians Society/Tulika Books, New Delhi, 2004). Pp.x + 189; 9 maps, 6 tables, 20 illustrations. Rs 350.00.

1. V.A. Smith, *The Early History of India from 600 B.C. to the Muhammadan Conquest* (Oxford, 1924), p. 118.
2. R.K. Mookerji, *Hindu Civilization from the Earliest Times up to the Establishment of the Maurya Empire* (Bombay, 1950), p. 293.
3. *Ibid.*, p. 295.
4. *The Age of the Nandas and Mauryas*, ed. K.A. Nilakanta Sastri (Benaras, 1952), pp. 79-80.
5. George Caradona, *Panini: A Survey of Research* (Mouton, The Hague/Delhi, 1976),

- p. 268, cited in Richard Solomon, *Indian Epigraphy* (Delhi, 1998), pp. 11, 12.
6. *The Kautilya Arthashastra*, Part I, ed, R.P. Kangle (University of Bombay, 1960), 2.24.1.
  7. *Ibid.*, 2.24.26.
  8. *Ibid.*, 14.1.11.
  9. *Ibid.*, 14.1.13.
  10. *Assalayana Sutta* (2.5.3) of the *Majjhima Nikaya* (*yonakambojesu annesu ca paccantiyesu janapadesu dveva vanna ayyo ca daso ca, ayyo hutva daso hoti, daso hutva ayyo hoti*), where Buddha, engaged in a dialogue with Ashvalayana, tells him, 'In Greece (Yona) and Kamboja and other frontier countries [of India] there are only two *varnas*—Arya and Dasa. Here the Arya can become dasa and the dasa can become Arya'.
  11. *Mahabharata*, 3.268.14.
  12. *Matsya Purana*, 215.86-87; 270.40.
  13. *Vishnudharmottara Purana*, 2.26, 35, 40.
  14. *Arthashastra*, 2.17.12; 12.4. 16-17; 12.5.48, etc.
  15. J.W. McCrindle, *The Invasion of India by Alexander the Great*, reprint (Delhi, 1992), pp. 294-95.
  16. *The Ashokavadana* (Sanskrit text compared with the Chinese version), edited, annotated and partly translated by Sujit Kumar Mukhopadhyaya, reprint (Delhi, 1982), pp. 52-53.